



Negative Portrayal of Vaccines by Commercial Websites: Tortious Misrepresentation

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ABSTRACT

Commercial website publishers use false and misleading information to create distrust of vaccines by claiming vaccines are ineffective and contain contaminants that cause autism and other disorders. The misinformation has resulted in decreased childhood vaccination rates and imperiled the public by allowing resurgence of vaccine-preventable illnesses. This Article argues that tort liability attaches to publishers of commercial websites for foreseeable harm that results when websites dissuade parents from vaccinating their children in favor of purchasing alternative products offered for sale on the websites.

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I. INTRODUCTION

*It ain't what you don't know that gets you into trouble,
it's what you know for sure that just ain't so.¹*

Commercial website publishers use false and misleading information to create distrust of vaccines by claiming vaccines² are unnecessary, and cause autism and other disorders.³ The misinformation has decreased childhood vaccination rates and imperiled the public by allowing a resurgence of vaccine-preventable illnesses.⁴ In lieu of vaccines, the websites offer for sale alternative products that lack any medically active ingredients or effects.⁵

This Article argues that tort liability attaches to publishers of commercial websites for foreseeable harm that results when websites dissuade parents from vaccinating their children in favor of purchasing products offered for sale on the websites.

This Article contends that viable tort actions may be grounded in the Restatement (Second) of Torts, sections 310,⁶ 311,⁷ 525,⁸ and 552.⁹

¹ Nigel Rees, *Policing Word Abuse*, FORBES (Aug. 13, 2009, 6:00 PM), <http://www.forbes.com/2009/08/12/nigel-rees-misquotes-opinions-rees.html> [<http://perma.cc/Z8NX-PXLN>].

² In this Article, “immunize” and “immunization” have the same meaning and are used interchangeably with “vaccinate” and “vaccination,” respectively. Likewise, the terms “disease” and “illness” are used as synonyms.

³ Eve Dubé et al., *Vaccine Hesitancy*, 9 HUM. VACCINES & IMMUNOTHERAPEUTICS 1763, 1765-66 (2013).

⁴ *Id.*; Robert M. Jacobson et al., *A Taxonomy of Reasoning Flaws in the Anti-Vaccine Movement*, 25 VACCINE 3146 (2007).

⁵ See, e.g., David Pratt, VACCINATION AND HOMEOPATHY, <http://davidpratt.info/vaccin.htm> [<http://perma.cc/4US8-S6UR>] (last visited Nov. 20, 2015) (providing false and misleading information about infectious diseases and recommends homeopathic alternatives to vaccination); Mikhail E. W. Plettner, *Homeopathic Prophylaxis for Childhood Diseases*, VACCINE LIBERATION, <http://www.vaclib.org/basic/health/homeotreatment.htm> [<http://perma.cc/XD9S-B79L>] (last visited Nov. 20, 2015) (“revealing” immunity conferring alternative products and cross references other anti-vaccine websites as proof); Shirley Lipschutz-Robinson, *Nosodes: Alternative Advantages to the Dangers of Conventional Vaccinations*, SHIRLEY’S WELLNESS CAFÉ, <http://www.shirleys-wellness-cafe.com/Homeopathy/Nosodes> [<http://perma.cc/2WQF-9944>] (last visited Nov. 20, 2015) (offering homeopathic “nosodes” as vaccine alternatives to “the dangers of conventional vaccinations”).

⁶ RESTATEMENT (SECOND) OF TORTS § 310 (AM. LAW INST. 1965).

⁷ *Id.* § 311.

to seek redress for harm to several groups of victim-plaintiffs. Specifically, sections 310 and 525 allow plaintiffs to claim fraud through intentional or reckless misrepresentation; sections 311 and 552 allow plaintiffs to allege negligent misrepresentation.

Potential victim-plaintiffs include (1) voluntarily unvaccinated children who contract a vaccine-preventable disease, (2) persons who contract a vaccine-preventable disease from a voluntarily unvaccinated person, and (3) parents of children who contract a vaccine-preventable disease. Although others may be harmed consequent to a vaccine-preventable disease outbreak, these three categories represent the first tier of those who would be harmed by the outbreak and most likely to bring a successful tort action for misrepresentation.

Part II—Vaccine Background—generally will describe currently available vaccines and how they effectively protect individuals and communities from illnesses. Part III—Autism and Other Vaccine Mythoi—will examine the fraudulent yet highly publicized “studies” that have cast vaccines in a negative light, decreased public confidence in them, and resulted in a critical decrease in childhood vaccination rates. Part IV—The Impact of Social Media—will discuss predatory website publishers who use the public’s decreased vaccine confidence to maintain anti-vaccine fictions while offering “alternative” products in lieu of vaccinations. Also discussed will be the negative effects the anti-vaccine movement has had on vaccination rates, the increase in morbidity and mortality from vaccine-preventable illnesses, and the resultant costs to victims and our communities. Part V—The Law—will discuss viable tort actions aimed at holding publishers of misleading and false information liable for the harm caused to affected parties. Part VI—Conclusion—will summarize the elements of this Article and suggest further avenues for research into liability theories to protect the unwary or gullible public from the effects of misleading commercial websites.

⁸ RESTATEMENT (SECOND) OF TORTS § 525 (AM. LAW INST. 1977).

⁹ *Id.* § 552.

II. VACCINE BACKGROUND

*One of the brightest chapters in the history of science is the impact of vaccines on human longevity and health.*¹⁰

A. Historical Perspective

“The invention of vaccination was a turning point in the war between microbes and humans. Although improved sanitation and antibiotics may have saved more lives, vaccines represent the most cost-effective life-saving device in history.”¹¹

In 1796, Dr. Edward Jenner, a British physician, “discovered” vaccination¹² when he injected material from a dairymaid infected with cowpox, a disease caused by a virus similar to the smallpox virus, into an eight-year-old boy.¹³ Several days later—in a procedure that would be a violation of medical ethics today—Jenner inoculated the boy with material from a fresh smallpox lesion and the child did not develop smallpox.¹⁴ Despite the success of Jenner’s technique in protecting against a terrifying medical threat, protests against its use arose throughout Europe.¹⁵ Books were written in opposition and people protested in the streets, but laws were passed in an effort to compel vaccination.¹⁶ Public resistance eventually faded in the face of repeated epidemics, yet some protestors continued to refuse vaccination and British law created an exception for “conscientious objectors.”¹⁷

The United States also saw resistance and controversy surrounding smallpox vaccination. During the 1901 to 1903 smallpox epidemic in

¹⁰ Stanley Plotkin, *History of Vaccination*, 111 PROC. NAT’L ACAD. SCI. 12283, 12283 (2014).

¹¹ Bali Pulendran & Rafi Ahmed, *Immunological Mechanisms of Vaccination*, 12 NAT. IMMUNOL. 509, 509 (2011).

¹² Patrick J. Pead, *Benjamin Jesty: New Light in the Dawn of Vaccination*, 362 THE LANCET 2104, 2104 (2003). Although Edward Jenner has been hailed as the first person to successfully vaccinate against an infectious disease, Benjamin Jesty has recently received recognition for devising the procedure. *Id.*

¹³ Stefan Riedel, *Edward Jenner and the History of Smallpox and Vaccination*, 18 BAYLOR U. MED. CTR. PROC. 21, 23-24 (2005).

¹⁴ *Id.* at 24.

¹⁵ Robert M. Wolfe & Lisa K. Sharp, *Anti-Vaccinationists Past and Present*, 325 BRIT. MED. J. 430, 430-31 (2002).

¹⁶ *Id.*

¹⁷ *Id.* at 431.

Boston, the Boston Board of Health started a voluntary vaccination program and sequestered infected patients in special quarantine facilities.¹⁸ Because the voluntary program was unsuccessful in halting the epidemic, the Board of Health ordered mandatory vaccinations.¹⁹ Protests began as residents claimed vaccination was a violation of civil rights and raised concerns about the dangers of the vaccine itself.²⁰ This controversy led to the landmark *Jacobson v. Massachusetts* case.²¹ In *Jacobson*, a citizen challenged the law that allowed the Board of Health to impose fines on those who refused vaccination.²² The Court held that, while the state could not direct vaccination for the protection of a single individual against an infectious disease, the state could, nevertheless, compel that person to be vaccinated for the protection of the public in general as part of the state's police power.²³ This decision foreshadowed the concept of herd immunity.²⁴ The *Jacobson* Court also wrote:

*"All laws," this court has said, "should receive a sensible construction. General terms should be so limited in their application as not to lead to injustice, oppression, or an absurd consequence. It will always, therefore, be presumed that the legislature intended exceptions to its language which would avoid results of this character. . . . The reason of the law in such cases should prevail over its letter."*²⁵ *Until otherwise informed by the highest court of Massachusetts, we are not inclined to hold that the statute establishes the absolute rule that an adult must be vaccinated if it be apparent or can be shown with reasonable certainty that he is not at the time a fit subject of vaccination, or that vaccination, by reason of his then condition, would*

¹⁸ Michael R. Albert et al., *The Last Smallpox Epidemic in Boston and the Vaccination Controversy [of] 1901-1903*, 344 NEW ENGL. J. MED. 375, 375 (2001).

¹⁹ *Id.*

²⁰ *Id.* at 375-76.

²¹ 197 U.S. 11 (1905).

²² *Id.* at 13.

²³ *Id.* at 39.

²⁴ See *infra* Part II.D and accompanying text.

²⁵ *Id.* (quoting *United States v. Kirby*, 74 U.S. 482, 483, 487 (1868)).

*seriously impair his health, or probably cause his death.*²⁶

This holding left unsettled the concept of vaccine exemption and called on the state to define such exemptions.

New vaccines and the science of immunology developed slowly over the succeeding years. Vaccines were developed for rabies in 1885, typhoid and cholera in 1896, and plague in 1897.²⁷ Dozens more vaccines were developed during the twentieth century and another ten in the first fifteen years of the twenty-first century.²⁸ Seventeen vaccinations are now routinely recommended for infants, children, and adolescents.²⁹ Several others are available to populations at specific risk of contracting infections that are not a threat to the general population.³⁰

B. Why Vaccinate?

Vaccination programs are used to prevent or control vaccine-preventable illnesses to limit “the disruptive impacts associated with outbreaks of disease on communities, schools, and institutions . . . [and] reduce absences from work for ill persons and for persons caring for sick children, decrease absences from school, and limit health care utilization associated with treatment visits.”³¹ The prevalence of childhood and adult vaccine-preventable illnesses has been dramatically reduced. Smallpox has been eradicated worldwide; polio has been eliminated in the U.S. (and most other nations); and

²⁶ *Id.* at 39.

²⁷ Plotkin, *supra* note 10, at 12284.

²⁸ *Id.*

²⁹ Anne Schuchat & Lisa A. Jackson, *Immunization Principles and Vaccine Use*, in HARRISON’S PRINCIPLES OF INTERNAL MED., 785, 787 (Dennis L. Kasper et al. eds., 19th ed. 2015). Vaccinations for infants, children, and adolescents include diphtheria, *Haemophilus influenza* type b, hepatitis A, hepatitis B, human papilloma virus, influenza, measles, meningococcal disease (meningitis), mumps, pertussis (whooping cough), pneumococcal diseases, poliomyelitis, rotavirus, rubella (German measles), tetanus, and varicella (chickenpox); measles, mumps and rubella are combined into a single vaccination known as MMR and diphtheria, tetanus, and pertussis are combined into a single vaccination known as DTaP (Diphtheria, Tetanus, and Pertussis). *Id.*

³⁰ Plotkin, *supra* note 10, at 12284. Additional vaccinations are available for anthrax, cholera, Japanese encephalitis, Lyme disease, plague, rabies, tick-borne encephalitis, and zoster. *Id.*

³¹ Schuchat, *supra* note 29, at 785.

diphtheria, measles, mumps, rubella, *Haemophilus influenza*, and hepatitis A cases have been reduced by more than 98%.³² Other significant advances include a 95% reduction in varicella (chicken pox), a 94% reduction in tetanus, and a 76% reduction in pertussis (whooping cough).³³

C. How Vaccines Create Immunity in Individuals

Vaccines are made from live attenuated (weakened) viruses or parts of viruses or bacteria that cause the illness targeted by the vaccine.³⁴ When administered, a vaccine is recognized by the body as a foreign material.³⁵ The small amount of foreign material in the vaccine stimulates one's immune system to form antibodies³⁶ to the foreign material, creating an immune system "memory" of the foreign material in the vaccination.³⁷ Whenever the vaccinated person's immune system detects the same foreign material in the form of an infective virus or bacterium, the immune system recognizes the material as foreign and neutralizes it.³⁸ Because the vaccination primed the immune system response, the response is much greater and more rapid than if the person had never been exposed to the foreign material.³⁹ By this mechanism, individuals become immune to the illnesses that the vaccinations target. Without this immunity, contact with an infectious virus or bacterium would lead to illness because the immune system could not respond rapidly or effectively enough to neutralize the infectious agent.

³² *Id.*

³³ *Id.*

³⁴ Ctrs. for Disease Control and Prevention, *Understanding How Vaccines Work*, <http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/vacsafe-understand-color-office.pdf> [<http://perma.cc/ETK7-75GL>] (last visited Nov. 20, 2015); see also Peter J. Delves & Ivan M. Roitt, *The Immune System*, 343 NEW ENGL. J. MED. 37 (2000).

³⁵ Ctrs. for Disease Control and Prevention, *Understanding How Vaccines Work*, <http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/vacsafe-understand-color-office.pdf> [<http://perma.cc/ETK7-75GL>] (last visited Nov. 20, 2015); see generally Peter J. Delves & Ivan M. Roitt, *The Immune System*, 343 NEW ENGL. J. MED. 37 (2000).

³⁶ An antibody is an immune system component that neutralizes infections and other challenges that the immune system interprets as being foreign and, therefore, undesirable.

³⁷ Ctrs. for Disease Control and Prevention, *supra* note 34.

³⁸ *Id.*

³⁹ *Id.*

Not all vaccines produce a sufficient quantity of antibodies in one dose to provide protection. Some vaccines—such as the combination measles-mumps-rubella (MMR) and diphtheria-tetanus-pertussis (DTaP) vaccines—require more than one initial dose or additional “booster” doses several years after initial vaccination.⁴⁰

A few vaccines contain an adjuvant chemical that helps the immune system develop a response to the vaccine’s viral or bacterial contents.⁴¹ This is especially useful for older patients whose immune systems are not as capable as those of younger individuals; therefore, these adjuvants are most useful in vaccines such as influenza, from which an aging population is most at risk.⁴²

Some believe there are few significant adverse effects associated with acquiring a vaccine-preventable illness and, thereby, developing natural immunity. On the contrary, acquiring a vaccine-preventable illness poses significant unnecessary risks of severe morbidity, lifetime disabilities, and death.⁴³

D. Herd immunity: Creating Protection for Populations

While vaccinations given to a single person can provide that individual with immunity, they are not 100% effective.⁴⁴ Additionally, some people cannot be vaccinated. These include the very young,⁴⁵ people with known sensitivities or allergies to a vaccine component, are pregnant (some vaccines), and those whose immune systems are compromised by immune system illnesses, including certain malignancies, HIV, and other conditions that suppress the immune system’s ability to respond appropriately to vaccine challenges.⁴⁶

⁴⁰ *Id.*

⁴¹ Seunghoon Han, *Clinical Vaccine Development*, 4 CLIN. EXP. VACCINE RES. 46, 51 (2015).

⁴² *Id.*

⁴³ Ctrs. for Disease Control and Prevention, *supra* note 34. See *infra* Part IV.C.1 for further explanation.

⁴⁴ U. Heininger et al., *The Concept of Vaccination Failure*, 30 VACCINE 1265, 1266 (2012).

⁴⁵ Ctrs. for Disease Control and Prevention, *Recommended immunization schedule for persons aged 0 through 18 years – United States, 2015*, <http://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-schedule-bw.pdf> [<http://perma.cc/4N9K-Q7Y6>] (last visited Nov. 20, 2015). For example, the measles-mumps-rubella vaccine is not administered before the child is twelve months old. *Id.*

⁴⁶ Saad B. Omer et al., *Vaccine Refusal, Mandatory Immunization, and the Risks of Vaccine-Preventable Diseases*, 360 NEW ENGL. J. MED. 1981, 1984 (2009).

To protect community members who cannot be properly immunized, those who are immunized create a collective buffer to prevent infection or limit the spread of infection.⁴⁷ Herd immunity is the accumulation of a critical number of vaccine-protected individuals to effectively protect the general population by providing a buffer and is an indirect benefit of the accumulated vaccination of many individuals.⁴⁸ Because infectious illnesses vary in their infectivity, the proportion of the population that must be immunized to provide protection for the unvaccinated varies considerably.⁴⁹ An immunization rate greater than 90% is required to provide herd immunity protection for a highly infective disease such as measles; whereas only a 35% to 75% rate is needed to protect against influenza A.⁵⁰

In summary, vaccination provides effective direct immunity for individuals and collectively provides herd immunity for communities if the proportion of vaccinated individuals is high enough. If enough individuals are vaccinated, the resultant herd immunity will afford some protection to those who cannot be vaccinated. Failure to vaccinate an individual endangers not only that individual, but collectively threatens the integrity of the herd immunity that indirectly protects those who cannot be vaccinated.

⁴⁷ Paul Fine et al., *Herd Immunity*, 52 VACCINES 911, 911 (2011).

⁴⁸ *Id.*

⁴⁹ *Id.* at 911-13.

⁵⁰ *See id.* at 913. This rate fluctuates because the infectivity of influenza A varies from year to year depending on the characteristics of each new viral strain. *Id.*

III. AUTISM AND OTHER VACCINE MYTHOI

*Everyone is entitled to his own opinions, not his own facts.*⁵¹

*False facts are highly injurious to the progress of science, for they often endure long.*⁵²

A. What is autism?

The signs and symptoms of autism and related disorders develop during very early childhood and transform an otherwise normal child in whom parents have invested their love and dreams into the inwardly focused and unsociable entity described below.

The defining symptoms of autism almost invariably become overt in toddlers and preschoolers. . . . [S]ymptoms may be noted from infancy or become evident after a period of normal or more normal development. There are three key manifestations of autism:

1. Impaired sociability, empathy, and ability to read other people's moods and intentions, with resulting inadequate or inappropriate social interactions.

2. Rigidity and perseveration, including both stereotypies (purposeless repetitive movements and activities), the need for sameness, and resistance to change.

3. Impaired language, communication, and imaginative play. Speech is typically delayed or may regress. Comprehension is impaired, if not at the word level, then at the level of sentences. Nonverbal and verbal language are affected, and pretend play is delayed or absent. Some children are nonverbal or have sparse, impoverished, poorly articulated, and agrammatical speech. A mostly nonverbal child may utter a rare, well-articulated sentence. In other children who have or do not have delayed talking, speech is abundant and

⁵¹ CHARLES C. DOYLE ET AL., THE DICTIONARY OF MODERN PROVERBS 185 (2012). Originally printed in 1950 as “Every man has a right to his own opinion, but no man has a right to be wrong in his facts,” this aphorism has also been attributed to James Schlesinger and Daniel Patrick Moynihan. *Id.*

⁵² CHARLES DARWIN, THE DESCENT OF MAN 780 (1902).

rich but with an atypical vocabulary and clearly abnormal features, notably echolalia, frequent verbatim use of scripts, and unusual prosody.

The severity of autism's deficits is extremely variable. Therefore, the term autism spectrum disorders (ASDs), or the autisms, is appropriate because it denotes a bell-shaped curve of impairment.⁵³

It is no wonder an autistic child's regressive metamorphosis is so distressing to parents who may seek to blame others when no one is at fault, and may pursue remedies and miracle treatments when none exists.

B. Former physician Andrew Wakefield and the autism hoax

In 1998, Andrew Wakefield, then a British physician and medical researcher, wrote an article that was published in *The Lancet*, claiming the measles-mumps-rubella (MMR) combination vaccine caused autism.⁵⁴ During the press conference announcing the article's publication, Wakefield said, "I cannot support the continued use of the three vaccines given together. . . . My concerns are that one more case of this is too many and that we put children at no greater risk if we dissociated those vaccines into three, but we may be averting the possibility of this problem."⁵⁵

Public response was immediate. Many parents were understandably concerned about the impact of future immunizations on their children while others were fixing blame on the MMR vaccine for their children's already diagnosed autism.⁵⁶ As with the smallpox vaccination protests of two centuries earlier, people wrote about their concerns and openly protested; but modernly, the Internet and social media allow unfettered and instant access to millions of readers. As protests mounted, fear of autism caused parents to eschew vaccinations and, as a result, herd immunity diminished.⁵⁷ As a consequence of

⁵³ Isabelle Rapin & Roberto F. Tuchman, *Autism: Definition, Neurobiology, Screening, Diagnosis*, 55 PEDIATR. CLIN. N. AM. 1129, 1129-30 (2008).

⁵⁴ See A. J. Wakefield et al., *Ileal-Lymphoid Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children*, 351 THE LANCET 637 (1998).

⁵⁵ SETH MNOOKIN, THE LANCET PAPER, THE PANIC VIRUS 107-08 (2011).

⁵⁶ See Brian Deer, *How the Vaccine Crisis was Meant to Make Money*, 342 BRIT. MED. J. 136 (2011).

⁵⁷ *Id.* at 138.

falling immunization rates and the resulting degradation of herd immunity, measles outbreaks were reported with increased frequency, and a thirteen-year-old boy died of measles in 2006—the first death from measles in fourteen years.⁵⁸

While the public's focus was transfixed on the dangers of the MMR vaccine as reported by Wakefield, the scientific and medical communities' attention was drawn to the integrity of Wakefield's study and the validity of his results.⁵⁹ After years of analysis of Wakefield's scant but closely held data, investigators found proof of fraud and "[c]lear evidence of falsification of data."⁶⁰ Wakefield studied only twelve children, and none of the cases could be reconciled with their medical records.⁶¹ The cases were chosen from a selectively referred group of children with pre-existing developmental concerns, and Wakefield accepted the supposition of eight families who subjectively blamed the MMR vaccine for their child's developmental symptoms.⁶²

Investigators also discovered that three years prior to publication of the *Lancet* article criticizing the three-in-one MMR vaccine, Wakefield obtained a patent for a "safer [single] measles shot" for which he was paid £435,643 by a company who was to market the vaccine in the wake of the controversy created by the soon-to-be-published article.⁶³ Wakefield also received £890,000 from the British government.⁶⁴ Wakefield's medical school funneled an additional

⁵⁸ *Id.* at 139.

⁵⁹ See Brian Deer, *How the Case Against the MMR Vaccine Was Fixed*, 342 BRIT. MED. J. 77 (2011).

⁶⁰ Fiona Godlee et al., *Wakefield's Article Linking MMR Vaccine and Autism Was Fraudulent*, 342 THE LANCET 64, 64 (2011).

⁶¹ *Id.* at 65.

⁶² See Deer, *supra* note 60, at 77.

⁶³ Deer, *supra* note 56, at 140. At the average 1999 currency conversion rate of \$1.62 per British Pound, £435,643 equaled \$705,742. Yearly Average Rates, USFOREX FOREIGN EXCHANGE SERVICES, <http://www.usforex.com/forex-tools/historical-rate-tools/yearly-average-rates> [http://perma.cc/4ZWW-697D] (last visited Nov. 20, 2015) (choose to compare "British Pound" to "US Dollar" and click on "Retrieve Data").

⁶⁴ Deer, *supra* note 56, at 140. At the average 1999 currency conversion rate of \$1.62 per British Pound, the sum included £800,000 direct grant, £40,000 for "executive staff costs," and £50,000 for travel expenses, equating to \$1,444,180. Yearly Average Rates, USFOREX FOREIGN EXCHANGE SERVICES, <http://www.usforex.com/forex-tools/historical-rate-tools/yearly-average-rates>

£50,000 through a hospital charity for Wakefield's research and seed money for his business venture.⁶⁵

Investigators further found that, in 1996, Wakefield contracted with a solicitor for Justice, Awareness & Basic Support (JABS), an outspoken anti-vaccine group, to research the MMR vaccine with the express intent to "establish the causal link between the administration of the vaccines and the conditions outlined."⁶⁶ Wakefield's research was intended to provide supportive data that could form the basis of product liability litigation against the vaccine manufacturer.⁶⁷ The solicitor paid Wakefield £150 per hour for his research,⁶⁸ plus an additional £50,000 to collect the data.⁶⁹

The London School of Medicine's dean of research dubbed Wakefield's study "probably the worst paper that's ever been published in the history of [*The Lancet*]."⁷⁰ As a result of the investigations and discovery of fraud, *The Lancet* partially retracted Wakefield's article in 2004⁷¹ and fully retracted it in 2010.⁷²

[<http://perma.cc/4ZWW-697D>] (last visited Nov. 20, 2015) (choose to compare "British Pound" to "US Dollar" and click on "Retrieve Data").

⁶⁵ Deer, *supra* note 56, at 140. At the average 1999 currency conversion rate of \$1.62 per British Pound, £50,000 equaled \$81,000. Yearly Average Rates, USFOREX FOREIGN EXCHANGE SERVICES, <http://www.usforex.com/forex-tools/historical-rate-tools/yearly-average-rates> [<http://perma.cc/4ZWW-697D>] (last visited Nov. 20, 2015) (choose to compare "British Pound" to "US Dollar" and click on "Retrieve Data").

⁶⁶ MNOOKIN, *supra* note 55, at 116.

⁶⁷ *Id.*

⁶⁸ Deer, *supra* note 56, at 137. At the average 1999 currency conversion rate of \$1.62 per British Pound, £150 equaled \$243. Yearly Average Rates, USFOREX FOREIGN EXCHANGE SERVICES, <http://www.usforex.com/forex-tools/historical-rate-tools/yearly-average-rates> [<http://perma.cc/4ZWW-697D>] (last visited Nov. 20, 2015) (choose to compare "British Pound" to "US Dollar" and click on "Retrieve Data").

⁶⁹ MNOOKIN, *supra* note 55, at 116. At the average 1999 currency conversion rate of \$1.62 per British Pound, £50,000 equaled \$81,000. Yearly Average Rates, USFOREX FOREIGN EXCHANGE SERVICES, <http://www.usforex.com/forex-tools/historical-rate-tools/yearly-average-rates> [<http://perma.cc/4ZWW-697D>] (last visited Nov. 20, 2015) (choose to compare "British Pound" to "US Dollar" and click on "Retrieve Data").

⁷⁰ MNOOKIN, *supra* note 55, at 111. *The Lancet* has been published regularly since 1823.

⁷¹ Simon H. Murch et al., *Retraction of an Interpretation*, 363 THE LANCET 750, 750 (2004).

In 2010, for “serious professional misconduct,” Wakefield’s name was “erased from the medical register”⁷³ by the General Medical Council.⁷⁴ The Council “concluded that it is the only sanction that is appropriate to protect patients and is in the wider public interest, including the maintenance of public trust and confidence in the profession and is proportionate to the serious and wide-ranging findings made against him.”⁷⁵ Thus ended Wakefield’s medical career in the U.K. but did not abate the roiling controversy.

C. The Mercury Myth

Wakefield’s autism hoax has not been the only controversy fueled by fraudulent and misleading writings. A similar deception involving mercury and autism was on the horizon.

Thimerosal is a vaccine additive containing ethylmercury, used in trace amounts in vaccines since the 1930s because it prevented bacterial contamination of the vaccine, especially in multi-dose vaccine vials.⁷⁶ In 1999, the American Academy of Pediatrics and the United States Public Health Service published a joint statement⁷⁷ announcing an agreement with vaccine manufacturers to remove thimerosal from vaccines as a precaution, although no adverse effects had been found. By 2001, thimerosal had been removed from all vaccines except multi-dose influenza vaccines vials.⁷⁸

Also in 1999, Albert Enayati, who had been laid off by his employer, Pfizer (an international pharmaceutical manufacturer), sought to link autism to mercury in vaccines.⁷⁹ He aligned himself

⁷² The Editors of *The Lancet*, *Retraction—Ileal-Lymphoid-Nodular Hyperplasia, Non-Specific Colitis, and Pervasive Developmental Disorder in Children*, 375 *THE LANCET* 445, 445 (2010).

⁷³ Wakefield’s license to practice medicine was revoked and his medical credentials were no longer recognized in the U.K.

⁷⁴ Fitness to Practice Panel Report, General Medical Council at *7, *9 (May 24, 2010), <https://jdc325.files.wordpress.com/2010/05/andrew-wakefield-struck-off-gmc.pdf> [<http://perma.cc/7TC7-CEAK>].

⁷⁵ *Id.*, at *9.

⁷⁶ Joint statement of the American Academy of Pediatrics (AAP) and the United States Public Health Service (USPHS), 104 *PEDIATRICS* 568, 568-69 (1999) (A multi-dose vial contains a single vaccine in sufficient quantity to administer to many individuals and is often used in developing countries).

⁷⁷ *Id.* at 568.

⁷⁸ Sarah K. Parker et al., *Thimerosal-Containing Vaccines and Autistic Spectrum Disorder*, 114 *PEDIATRICS* 793, 794 (2004).

⁷⁹ Seth Mnookin, *The Mercury Moms*, *THE PANIC VIRUS* 133, 142-43 (2011).

with an anti-vaccine group and hired a marketing specialist who told him that his claim would not be taken seriously “unless it’s written in scientific jargon.”⁸⁰ Thereafter, Enayati wrote an article entitled “Autism: A Novel Form of Mercury Poisoning,” the summary of which read, in part:

*A review of medical literature and US government data suggests that: (i) many cases of idiopathic autism are induced by early mercury exposure from thimerosal; (ii) this type of autism represents an unrecognized mercurial syndrome; and (iii) genetic and non-genetic factors establish a predisposition whereby thimerosal’s adverse effects occur only in some children.*⁸¹

Enayati and his supporters could not find a “respected academic journal” in which to publish his work.⁸² However, it was published by *Medical Hypotheses*, a non-scientific Internet publication that:

*proudly eschewed peer review, a process it said disapprovingly “can oblige authors to distort their true views to satisfy referees.” In the “Aims and Scopes” section of its guidelines to writers, the journal emphasized that it had no desire to “predict whether ideas and facts are ‘true’”—in fact, it was eager to print “even probably untrue papers” so long as they spurred discussion.*⁸³

Enayati’s article, published in 2001,

was marked by the conspicuous omission of anything that might contradict the authors’ thesis in any way. Rather than address the known differences between ethylmercury and methylmercury—differences that were one of the main points used by those who argued that thimerosal was safe—the paper acted as if no such difference existed. . . . There was no acknowledgment of the total absence of reports of autism in every previous study of either ethyl- or methylmercury poisoning, nor

⁸⁰ *Id.* at 142.

⁸¹ *Id.* at 142-43; S. Bernard et al., *Autism: A Novel Form of Mercury Poisoning*, 56 MED. HYPOTHESES 462, 462 (2001).

⁸² Mnookin, *supra* note 80, at 143.

⁸³ *Id.*

*was there an acknowledgment that the one published study that had looked for elevated mercury levels in children with autism had not found any such evidence. Finally, and most significantly, there was the paper's failure to provide even a single example of "detectable levels" of mercury in an autistic child. The paper's authors tried to explain this omission by referring back to the unproven conjecture that had launched the project in the first place: "parental reports of autistic children with elevated Hg."*⁸⁴

In *The Panic Virus*, Seth Mnookin characterized Enayati's unscientific methods and misrepresentation of facts as "a tutorial in bad science" and said, "the paper's title may have been more accurate than its authors intended: Autism was a 'novel' form of mercury poisoning only in that it was entirely fictional."⁸⁵

Enayati's claim that "mercury" was causing children's nervous systems to somehow develop autism took advantage of actual mercury poisonings in Minamata, Japan. The Minamata poisonings were the result of consuming contaminated fish and sea mammals contaminated with methylmercury, a neurotoxin.⁸⁶ In contrast, ethylmercury—the form contained in the vaccine additive thimerosal—is chemically bound with sulfur, is metabolized and excreted rapidly, and is relatively non-toxic."⁸⁷ A study of 109,863 children who received vaccines containing trace amounts of ethylmercury found no link to autism.⁸⁸

Enayati's imaginary and misleading claims that mimicked real science added to the collection of anecdotes and hyperbole that stirred discontent in those opposed to vaccines.

D. MMR Does Not Cause Autism

The importance of the Wakefield MMR allegations and the parallel thimerosal claims drove the scientific community to study intensely

⁸⁴ *Id.* at 144.

⁸⁵ *Id.* at 144-45.

⁸⁶ Thomas W. Clarkson et al., *The Toxicology of Mercury-Current Exposures and Clinical Manifestations*, 349 NEW ENGL. J. MED. 1731, 1734-36 (2003).

⁸⁷ *Id.* at 1733.

⁸⁸ Nick Andrews et al., *Thimerosal Exposure in Infants and Developmental Disorders: A Retrospective Cohort Study in the United Kingdom Does Not Support a Causal Association*, 114 PEDIATRICS 284, 584, 590 (2004).

these issues to either prove or disprove the assertions. During the subsequent fifteen years, more than 1100 peer-reviewed studies were published.⁸⁹ A 2004 study examined all published research and selected (1) ten that were in English, (2) dealt directly with issues involving the MMR vaccine and ethylmercury exposure, and (3) whose study subjects were not already parties to litigation.⁹⁰ This meta-analysis (a study of studies)⁹¹ included publications that studied 1,256,407 children⁹² of both case-control and cohort studies.⁹³

The meta-analysis found “no evidence of a relationship between vaccination and autism or autism spectrum disorders, and as such advocate[s] the continuation of immunisation programs according to national guidelines.”⁹⁴ Ironically, the incidence of autism continued to increase after thimerosal was removed from childhood vaccines.⁹⁵ Yet the “rising awareness of autism incidence, prevalence, and the postulated causation by childhood vaccinations has led to both an increased distrust in the trade-off between vaccine benefit outweighing potential risks and an opportunity for disease resurgence”⁹⁶ as public opinion outweighs the clear scientific evidence.

⁸⁹ Luke E. Taylor et al., *Vaccines are Not Associated with Autism: An Evidence-Based Meta-Analysis of Case-Control and Cohort Studies*, 32 VACCINE 3623, 3625 (2014).

⁹⁰ *Id.* at 3624.

⁹¹ A. B. Hidich, *Meta-analysis in Medical Research*, 14 HIPPOKRATIA, 29, 29 (2010). A meta-analysis is a statistical technique that combines multiple independent studies and examines common cohorts and variables to find shared patterns and statistically significant common findings.

⁹² Taylor, *supra* note 90, at 3623, 3625-26 (“This meta-analysis aims to quantitatively assess the available data from studies undertaken in various countries regarding autism rates and childhood vaccination so that the relationship between these two, whatever its significance, can be adequately substantiated.”).

⁹³ See Jae W. Song & Kevin C. Chung, *Observational Studies: Cohort and Case Control Studies*, 126 PLASTIC AND RECONSTRUCTIVE SURGERY 2234 (2010). A case control study compares patients with rare illnesses (cases) with otherwise healthy patients and retrospectively compares the frequency of risk factor exposure to determine if there is a relationship between an acquired illness and risk factor exposure. A cohort study longitudinally follows an initially healthy subject group (the cohort) to determine their eventual risk of developing an illness after exposure to the theoretical risk factor.

⁹⁴ Taylor, *supra* note 90, at 3628.

⁹⁵ Emily C. de los Reyes, *Autism and Immunizations*, 67 ARCH. NEUROL. 490, 491 (2010).

⁹⁶ Taylor, *supra* note 90, at 3623.

E. Public Health Becomes Public Enemy: The Dunning-Kruger Effect

A persistent belief in an impossible or disproven idea is difficult to comprehend. However, two psychology researchers developed a theory that explains the phenomenon.

In 1999, Cornell University research psychologists David Dunning and Justin Kruger studied relatively skilled and unskilled individuals and the manner by which they evaluated complex information and their confidence in doing so.⁹⁷ Dunning and Kruger consistently found that relatively unskilled individuals “overestimated their logical reasoning ability” and “overestimated the number of test items they got right” by a wide margin.⁹⁸ Despite their low performance, the relatively unskilled individuals’ illusory superiority persisted even when they were confronted with conflicting evidence, indicating an inability to appreciate their own “incompetence.”⁹⁹

Paradoxically, their findings relating to highly skilled individuals showed that those who scored best on cognitive tests “assumed the same was true for their [relatively unskilled] peers.”¹⁰⁰ This systematic bias caused highly skilled individuals to underestimate their abilities while projecting a high level of cognitive function and performance to the relatively unskilled individuals.¹⁰¹

These findings became known as the Dunning-Kruger effect, but the phenomenon had been mentioned in a different, yet illustrative, context more than forty years earlier:

Suppose an individual believes something with his whole heart; suppose further that he has a commitment to this belief, that he has taken irrevocable actions because of it; finally, suppose that he is presented with evidence, unequivocal and undeniable evidence, that his belief is wrong: what will happen? The individual will frequently emerge, not only unshaken, but even more convinced of the truth of his beliefs than ever

⁹⁷ See Justin Kruger & David Dunning, *Unskilled and Unaware of It: How Difficulties in Recognizing One’s Own Incompetence Lead to Inflated Self-Assessments*, 77 J. PERSONALITY AND SOC. PSYCHOL. 1121, 1121 (1999).

⁹⁸ *Id.* at 1125.

⁹⁹ *Id.* at 1127.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 1131.

*before. Indeed, he may even show a new fervor about convincing and converting other people to his view.*¹⁰²

The Wakefield article and thimerosal claims caused justifiable public concern about the safety of the MMR vaccine as well as the vaccine program in general. “Understandably, some parents are backing away from vaccines; one in ten are choosing not to give one or more vaccines. Some aren’t giving any vaccines at all; since 1991, the percentage of unvaccinated children has more than doubled.”¹⁰³ Despite the failure of studies that included well over 1.2 million children, to establish a causal link between vaccinations and autism, vaccine confidence waned and the resulting decrease in vaccination rates has caused a resurgence of vaccine-preventable childhood illnesses due to “unwarranted fear and speculation [that] threatens children around the world. . . .”¹⁰⁴

The Dunning-Kruger effect may explain why many people continue to hold fast to their beliefs even in the face of overwhelming evidence that the “notion that vaccinations cause autism is pure myth” and the scientific community’s sentiment that “failure to immunize based on unfounded fears constitutes an injustice to children.”¹⁰⁵

This account of a young mother’s unwavering belief in the impossible and her search for someone or something to blame illustrates the power of the Dunning-Kruger effect:

When thimerosal was long gone from vaccines, people kept discovering that their children were being made autistic by it. Searching minds grasped this attractive explanation and wouldn’t let go. “It was absolutely the vaccines. My husband and I have no doubt about that at all,” Andrea Taube of Tucson told a reporter in 2005. Her son was normal, she said, until a few days before his first birthday, when he got four shots—“all with mercury”—and then began showing symptoms of autism. His first birthday was in 2003, by which point

¹⁰² LEON FESTINGER ET AL., WHEN PROPHECY FAILS 3 (2008).

¹⁰³ PAUL A. OFFITT, DEADLY CHOICES—HOW THE ANTI-VACCINE MOVEMENT THREATENS US ALL, at xv (2011).

¹⁰⁴ Reyes, *supra* note 96, at 491.

¹⁰⁵ *Id.*

*thimerosal remained, in fact, only in one shot, against influenza.*¹⁰⁶

This account also illustrates the tendency to ascribe a correlation—when none exists—to events that occur simultaneously or nearly simultaneously.

F. As One Belief Is Disproved, Another Is Created to Take Its Place

A “paradox of [vaccine] success is that, as parents have become less familiar with these diseases, they have become more questioning about the safety and necessity of immunisation.”¹⁰⁷ As an increasing number of scientific studies emerge validating the effectiveness of vaccines and disproving any autism causation, anti-vaccine activists have turned to other schemes to undermine vaccine programs.¹⁰⁸ Some parents have come to believe that a child’s immune system is not developed enough to “cope” with the number and variety of vaccines being recommended and may, in fact, be damaged as a result of receiving so many immune system challenges.¹⁰⁹ Children’s immune systems handle countless challenges in their normal environment and there is no evidence that their immune systems would be overloaded by multiple vaccinations.¹¹⁰

When one belief is irrefutably contradicted by valid scientific evidence, another explanation is developed to take the place of the one debunked, and with the same aim: to discredit vaccines.

G. Enter the Angry Parent

As the anti-vaccine movement gained momentum and vaccination rates fell, the protective effect of herd immunity has consequently diminished. Vaccine-preventable disease rates in unvaccinated children have climbed since the Wakefield and Enayati publications.¹¹¹ For example, measles—once all but eradicated in the United States—

¹⁰⁶ ARTHUR ALLEN, VACCINE—THE CONTROVERSIAL STORY OF MEDICINE’S GREATEST LIFESAVER, 421 (2007).

¹⁰⁷ Shona Hilton et al., ‘Combined Vaccines Are Like a Sudden Onslaught to the Body’s Immune System’: Parental Concerns About Vaccine ‘Overload’ and ‘Immune-Vulnerability,’ 24 VACCINE 4321, 4321, 4325 (2006).

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 4321.

¹¹¹ Omer, *supra* note 46, at 1984-85.

made a resurgence, most often in unvaccinated school-aged children.¹¹² Many of the index cases were imported from other countries where measles remains prevalent.¹¹³ In susceptible Jewish communities, where mumps had been reduced by more than 90%, a 2006 outbreak was characterized by “facilitated transmission [that] overcame vaccine-induced [herd] protection.”¹¹⁴ A case-controlled study found “a strong association between parental vaccine refusal and the risk of pertussis [whooping cough] infection in children” and that “[v]accine refusers had a twenty-three-fold increased risk.”¹¹⁵

As a consequence of these and other vaccine-preventable disease outbreaks, parents of children who cannot be vaccinated protested the reduction of the herd immunity that protects their children.¹¹⁶ Their anger is directed toward those who, based on false and misleading website information, choose not to vaccinate their children and collectively increase the risk of illness for those most susceptible.¹¹⁷ Those who cannot be vaccinated “depend on those around them to be vaccinated; if not, they’re the ones most likely to suffer during outbreaks.”¹¹⁸

“Caught in the middle are children. Left vulnerable, they’re suffering the diseases of their grandparents. Recent outbreaks of measles, mumps, whooping cough, and bacterial meningitis have caused hundreds to suffer and some to die—die because their parents feared vaccines more than the diseases they prevent.”¹¹⁹ This is the paradox created by anti-vaccine sentiment.

¹¹² CTRS. FOR DISEASE CONTROL AND PREVENTION, REPORT: ELIMINATION OF MEASLES, RUBELLA, AND CRS 10, 10-11 (Mar. 2012), <http://www.cdc.gov/measles/downloads/Report-elimination-measles-rubella-crs.pdf> [<http://perma.cc/S32R-8T87>]. CRS is an abbreviation for Congenital Rubella Syndrome. *Id.*

¹¹³ *Id.* An index case is the first case in an outbreak, from which all other cases result. *Id.*

¹¹⁴ Albert E. Barskey et al., *Mumps Outbreak in Orthodox Jewish Communities in the United States*, 367 NEW ENGL. J. MED. 1704, 1704 (2012).

¹¹⁵ Jason M. Glanz et al., *Parental Refusal of Pertussis Vaccination Is Associated With an Increased Risk of Pertussis Infection in Children*, 123 PEDIATRICS 1446, 1449 (2009).

¹¹⁶ OFFITT, *supra* note 104, at xvi (“Weakened by chemotherapy for their cancers, or immunosuppressive therapy for their transplants, or steroid therapy for their asthma, these children are particularly vulnerable.”).

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

IV. THE INFLUENCE OF SOCIAL MEDIA

*[T]here is no evidence whatsoever that vaccines of any kind . . . are effective in preventing the infectious diseases they are supposed to prevent.*¹²⁰

*I'm not a chemist, a physician, or someone with an advanced degree in biology. I'm just a mom with an internet connection.*¹²¹

This Part will examine techniques commercial websites use to convince readers that, despite scientific evidence supporting vaccine use, products for sale on the websites are safe and effective alternatives to vaccinations. However, a falsity in advertising is not necessarily tortious misrepresentation. Part V will examine the misrepresentation torts and the elements that must be proved in both fraudulent and negligent misrepresentation.

A. Commercial website deceptions

Despite the success of vaccines in reducing the incidence of vaccine-preventable diseases, some websites characterize vaccines as “ineffective, useless, or even dangerous.”¹²² In the gulf between fact and belief lies an opening for profit-seekers to financially benefit from the confusion. Anti-vaccine websites bombard readers with fictional

¹²⁰ VIERA SCHEIBNER, VACCINATION—100 YEARS OF ORTHODOX RESEARCH SHOWS THAT VACCINES REPRESENT A MEDICAL ASSAULT ON THE IMMUNE SYSTEM, at xv (1993). The author has a Ph.D. in geology. *Id.*

¹²¹ Daisy Luther, *What's Really in Your Flu Shot (Why You Should Never Get One Again!)*, HEALTHY HOLISTIC HEALING, <http://www.healthy-holistic-living.com/flu-shot.html?t=MAM> [<http://perma.cc/2FLV-759Y>] (last visited Nov. 20, 2015). Daisy Luther is a self-described freelance writer who, on this website, states: “The mainstream media is Public Enemy #1, a group of corporate whores who put on make-up and pretty outfit [sic] in order to seduce the public into believing what the puppet masters want them to believe. The media is [sic] owned by the same tie-wearing serial killers who own Big Pharma, government agencies and the financial industry. . . . It harkens back to the theories of Nazi Minister of Propaganda, Joseph Goebbels.” She then incorrectly attributes three quotations to Goebbels to illustrate her conclusions. *Id.*

¹²² Anna Kata, *Anti-Vaccine Activists, Web 2.0, and the Postmodern Paradigm—An Overview of Tactics and Tropes Used Online by the Anti-Vaccination Movement*, 30 VACCINE 3778, 3778 (2012).

claims that “babies get too many vaccines, overwhelming their immune systems.”¹²³

One of the reasons for acceptance of ideas that reside far afield from actual scientific knowledge is the “false balance” created by the media—“giving equal weight to unsupported or even discredited claims for the sake of appearing impartial.”¹²⁴ By providing relatively equal consideration to “both sides” of a public controversy, the media mean to achieve fairness through balanced reporting.¹²⁵ However, by allotting relatively equal coverage of both sides of an issue where there is incontrovertible evidence for one side, the media “give the impression of uncertainty where there is none, elevate a fringe group to a high-profile status, or suggest that opposing perspectives are equally well-supported by evidence.”¹²⁶ This allows anti-vaccine groups to gain public attention under the imprimatur of legitimate scientific debate.

Some vaccine opponents employ an increasingly wide variety of techniques to advance their agenda while advocating for alternatives they offer for sale. An expansive list of maladies attributed to vaccines includes Alzheimer’s disease, dyslexia, sociopathic personality, arthritis, multiple sclerosis, cancer, infertility, shaken baby syndrome, and the spread of a variety of infectious diseases including warts, herpes, and HIV.¹²⁷ Vaccine antagonists create plausibility for their

¹²³ OFFITT, *supra* note 104, at xv.

¹²⁴ Katrina vanden Heuvel, *The Distorting Reality of ‘False Balance’ in the Media*, WASH. POST (July 15, 2014), https://www.washingtonpost.com/opinions/katrina-vanden-heuvel-the-distorting-reality-of-false-balance-in-the-media/2014/07/14/6def5706-0b81-11e4-b8e5-d0de80767fc2_story.html [<http://perma.cc/464U-PYHF>]; see generally Robert S. Eshelman, *The Danger of Fair and Balanced*, COLUMBIA JOURNALISM REVIEW, http://www.cjr.org/essay/the_danger_of_fair_and_balance.php [<http://perma.cc/WMB8-DFKY>] (last visited Nov. 20, 2015).

¹²⁵ Christopher E. Clark, *A Question of Balance*, 30 SCI. COMM. 77, 80 (2008).

¹²⁶ *Id.*

¹²⁷ Julie Leask et al., “All Manner of Ills”: The Features of Serious Diseases Attributed to Vaccination, 28 VACCINE 3066, 3067-68 (2010). Shaken baby syndrome is not an illness but, rather, a constellation of injuries characteristic of babies who die as a result of being violently shaken by a physical abuser. Cindy W. Christian et al., *Abusive Head Trauma in Infants and Children*, 123 PEDIATRICS 1409, 1409, 1410 (2009).

claims by pointing to the heretofore idiopathic¹²⁸ nature of these maladies, their apparent increase in incidence, a “biological plausibility” created by incorrectly ascribing the disorders to nebulous and unfounded vaccine-produced immune system corruption, and the temporal relationship of vaccine administration to development of a condition.¹²⁹

Because the vaccine debate is difficult for lay people to understand, they often seek assistance from sources they trust.¹³⁰ One of these sources is the medical community, physicians especially. However, physicians may not provide all the information parents need and may not fully understand the parents’ conceptual model of how vaccines work, their individual and community benefits, the relative risks of vaccination, and the effects of the diseases they prevent.¹³¹ Therefore, 70% of parents will turn to the Internet instead of their physicians or a government agency as their primary source of information, principally for convenience (70%) and trustworthiness (17%).¹³² Using the most commonly employed search engines and most frequent vaccination search terms, a majority of searches produce predominantly anti-vaccine websites in the first ten search results.¹³³ The ready availability of alternate views advanced by “self-proclaimed experts” suggests there is controversy where there is none and the advice of legitimate scientific experts becomes but another opinion among many of apparently equal weight.¹³⁴

For example, Mothering.com, one of the most active resources for parents, “receiving 1.5 million unique visitors per month,” provides advice “discouraging [patients from using] chemotherapy or radiation

¹²⁸ Idiopathic refers to an illness for which its cause is currently unknown to medical science. Thomas Beaney, *Classifying Unknowns: The Idiopathic Problem*, 39 MED. HUMANIT. 126 (2013).

¹²⁹ Robert M. Wolfe, *Content and Design Attributes of Antivaccination Websites*, 287 J. AM. MED. ASS’N 3245, 3246 (2002); see also Leask, *supra* note 128, at 3068-69. Autism, for example, is usually diagnosed at the same age that children receive several vaccinations, causing parents to intuitively—but incorrectly—associate the two events. *Id.*

¹³⁰ Julie S. Downs et al., *Parents’ Vaccination Comprehension and Decisions*, 26 VACCINE 1595, 1596 (2008).

¹³¹ *Id.*

¹³² *Id.* at 1604.

¹³³ Anna Kata, *A Postmodern Pandora’s Box: Anti-Vaccination Misinformation on the Internet*, 28 VACCINE 1709 (2010).

¹³⁴ Kata, *supra* note 123, at 3779.

for cancer treatment . . . and insulin for diabetes” while also devoting many pages to vaccine disinformation.¹³⁵

Social media opportunists display “[w]ishful thinking and self-serving distortions of reality”¹³⁶ in using a variety of tactics and tropes to project their arguments as legitimate science while making their claims seem logical, and any opposing scientific evidence appear scant or false.¹³⁷ The tactics and tropes most amenable to tort liability are described below.

1. The Tactics

Skewing the science.¹³⁸ This tactic is often used to discredit scientifically validated information so it appears to be the result of poor experimental methods, conflicts of interest, and other vaguely defined researcher biases.¹³⁹ The science-skewers claim medical literature is incomplete and demands further research—such as comparing the incidence of illness and long-term effects between groups of vaccinated and unvaccinated children.¹⁴⁰ This “needed” research is chosen because it can never be ethically performed, leaving a seemingly critical issue forever unresolved and, therefore, in question.¹⁴¹ When a study is ethically designed by the anti-vaccine community and the results confirm the scientific evidence, the anti-vaccine community is quick to reject the study and criticize its own study design to discredit the findings.¹⁴²

¹³⁵ *Id.* at 3780. Mothering.com is available at <http://www.mothering.com> [<http://perma.cc/97XM-KVTV>] (last visited Nov. 20, 2015), its vaccine information is available at <http://www.mothering.com/forum/47-vaccinations/> [<http://perma.cc/J7ZB-EB5B>] (last visited Nov. 20, 2015).

¹³⁶ Robert M. Jacobson et al., *A Taxonomy of Reasoning Flaws in the Anti-Vaccine Movement*, 25 VACCINE 3146, 3147 (2007).

¹³⁷ *Id.* (“The tactics described are the movement’s ways of operating—i.e. actions they undertake to spread their messages (see Table 1). The tropes are commonly recurring themes and motifs used to make their arguments—i.e. oft-repeated mottos, phrases, and rebuttals, listed as they are typically phrased on anti-vaccination sites (see Table 2).”).

¹³⁸ *Id.* at 3781.

¹³⁹ *Id.* at 3781-82.

¹⁴⁰ *Id.* at 3782.

¹⁴¹ *Id.*

¹⁴² *Id.*

Shifting hypotheses.¹⁴³ When one proposed adverse effect of vaccines is debunked by valid scientific research, another rises to take its place. As the Wakefield MMR-autism hoax was discredited, Enayati's thimerosal-autism connection took center stage and, when the thimerosal connection hoax was exposed, aluminum became the next "cause" of the various adverse effects of vaccines.¹⁴⁴ In this Whac-a-Mole approach to sequentially disproved theories, anti-vaccine groups have progressed to claiming that other, unspecified "toxins" and "poisons" are the culprits.¹⁴⁵ Additionally, new claims were born that too many vaccines were being administered, overloading young and supposedly immature immune systems, and that vaccines were given in too short a time frame, ignoring the evidence-based optimal vaccine schedule to develop an immune response and protection from the target illnesses.¹⁴⁶

Censorship.¹⁴⁷ While claiming to be objectively informational, anti-vaccination websites regularly deny access to commenters who are pro-vaccination and delete material added to their website by vaccine advocates in the guise of providing "comment moderation."¹⁴⁸ For example, the Mothering.com Vaccination Forum Guidelines state "[w]e embrace all parents, regardless of their vaccination choice. Our Vaccinations forums discuss issues and concerns so that parents can make an informed decision. We are not, however, interested in hosting discussions advocating for mandatory vaccination."¹⁴⁹

Attacking the opposition.¹⁵⁰ Where scientific research and authentic debate fail, anti-vaccine activists attempt to win by intimidation. They file lawsuits against authors of critical material, issue ad hominem attacks—in one case, calling a respected scientist and author a "biostitute" (a "bioscience prostitute")—and publish arguably defamatory attacks.¹⁵¹ In one case, a Photoshopped image

¹⁴³ *Id.*

¹⁴⁴ *Id.*; see also Sandra J. Bean, *Emerging and Continuing Trends in Vaccine Opposition Website Content*, 29 VACCINE 1874, 1877 (2011).

¹⁴⁵ Kata, *supra* note 123, at 3782.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ Cynthia Mosher, *Vaccine Forum Guidelines*, MOTHERING.COM, <http://www.mothering.com/articles/vaccination-forum-guidelines/> [<http://perma.cc/K9PX-9L6K>] (last visited Nov. 20, 2015).

¹⁵⁰ Kata, *supra* note 123, at 3782-83.

¹⁵¹ *Id.*

was used to depict a group of well-known vaccine advocates eating a Thanksgiving dinner of a dead baby.¹⁵²

2. The Tropes

“I’m not anti-vaccination, I’m pro-safe vaccines.”¹⁵³ To avoid the label of being anti-vaccine, many websites claim not to be against vaccination but, rather, for some greater good such as safe vaccines and a “balanced scientific” approach to vaccination.¹⁵⁴ While providing misleading information, websites advocate that parents “do research”—meaning they should gather information that is reasonably available to them on the Internet—before deciding for themselves what, in their newly informed opinion, is right for their children.¹⁵⁵

“Vaccines are toxic.”¹⁵⁶ Many websites publish lists of supposed vaccine ingredients and pronounce their toxicity in broad terms, claiming the ingredients are known to cause poisoning.¹⁵⁷ However, these sites claim toxicity that may exist at very high doses but ignore evidence that those same substances in minute quantities are harmless and, often, naturally occur in the human body.¹⁵⁸ Claimed vaccine “toxin” effects from a single vaccine containing the substance as an inconsequentially small ingredient are compared to effects from chronic and daily long-term exposure to the ingredients at high concentrations.¹⁵⁹ One claim that raises moral and safety concerns is that vaccines contain aborted fetal tissue.¹⁶⁰

“Vaccines should be 100% safe.”¹⁶¹ Ignoring the reality that nothing can be perfectly safe under all conditions and that side effects can occur from any treatment, anti-vaccine advocates claim physicians do not trust vaccines since they will not pronounce them to be 100% safe and effective.¹⁶² This trope ignores both the impossibility of perfection while also ignoring the risk-benefit balance of vaccines that

¹⁵² *Id.*

¹⁵³ *Id.* at 3783.

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ Wolfe, *supra* note 130, at 3247.

¹⁶¹ Kata, *supra* note 123, at 3783.

¹⁶² *Id.*

are “one of the greatest achievements of biomedical science and public health.”¹⁶³

“You can’t prove vaccines are safe.”¹⁶⁴ This is the you-can’t-prove-a-negative trope. Even though scientific researchers have proven in studies of over 1.2 million children¹⁶⁵ that there is no evidence linking vaccines to autism, anti-vaccine advocates challenge scientists by claiming that, since the etiology of autism is unknown, the scientists have not proven that vaccines do not cause autism in every case.¹⁶⁶ The impossibility of proving the negative is seen as actual evidence of causation—or at least a refutation of the research that “fails to prove” vaccines’ safety.¹⁶⁷

“Vaccines don’t save us.”¹⁶⁸ Anti-vaccine websites display graphs intended to show that infectious disease rates were declining before vaccinations were used and that the decreased incidence of vaccine-preventable diseases is due, instead, to improvements in sanitation and availability of clean water.¹⁶⁹ This trope ignores the body of research that documents world-wide vaccine-preventable disease decline in areas where water and sanitation have been consistently good and have not declined in areas where vaccines are unavailable yet sanitation and potable water availability have improved.¹⁷⁰ Also unexplained is why not all disease rates decline simultaneously but, instead, decline only after vaccines are developed and distributed.

“Vaccines are unnatural.”¹⁷¹ Projecting the “natural is better” stance, anti-vaccine activists claim vaccines are not “natural” and, therefore, are somehow harmful.¹⁷² When presented as a natural alternative, parents have sought disease-induced immunity by

¹⁶³ Wolfe, *supra* note 130, at 3245.

¹⁶⁴ Kata, *supra* note 123, at 3783.

¹⁶⁵ Taylor, *supra* note 90, at 3625.

¹⁶⁶ Kata, *supra* note 123, at 3783.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ See, e.g., David Mihalovic, *Irrefutable Evidence Shows Historical Application of Vaccines Had No Health Benefit or Impact on Prevention of Infectious Disease*, PREVENTDISEASE.COM, http://preventdisease.com/news/13/052413_Irrefutable-Evidence-Historical-Application-Vaccines-No-Health-Benefit-Impact-on-Prevention-Infectious-Disease.shtml [<http://perma.cc/P2T2-XSJK>] (last visited Nov. 20, 2015).

¹⁷⁰ Kata, *supra* note 123, at 3783.

¹⁷¹ *Id.*

¹⁷² *Id.*

intentionally trying to infect their children with vaccine preventable diseases at events dubbed “chickenpox parties,” ignoring the serious morbidity associated with acquiring the naturally-occurring disease.¹⁷³

“You must choose between diseases and vaccine injuries.”¹⁷⁴

By portraying the vaccination decision in terms of acquiring and suffering the consequences of a naturally occurring disease or suffering the side effects of vaccines, anti-vaccine activists present an exclusive choice without regard for intermediate possibilities, such as vaccination without side effects—by far the most common outcome.¹⁷⁵

Jenny McCarthy, a former Playboy model and television personality, is a self-professed anti-vaccine spokesperson who used this trope when she said, “If you ask a parent of an autistic child if they want the measles or the autism, we will stand in line for the f—ing measles.”¹⁷⁶ This trope is especially effective when combined with the argument that vaccine-preventable diseases are so rare that vaccines are no longer needed, ignoring the benefit of herd immunity for those who cannot be vaccinated.¹⁷⁷

“Galileo was persecuted too.”¹⁷⁸ By comparing the work of anti-vaccine advocates to well-known historical figures who were considered heretics but were eventually proved correct, anti-vaccine advocates portray themselves as “brave mavericks” who challenge the scientific orthodoxy while awaiting vindication.¹⁷⁹

“Science was wrong before.”¹⁸⁰ Websites use examples of where science has been wrong to broadly paint all science as suspect and that alternate views provide another equally valid source of “truth” or explanation of natural and medical phenomena.¹⁸¹

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ Jeffrey Kluger, *Jenny McCarthy on Autism and Vaccines*, TIME, <http://content.time.com/time/health/article/0,8599,1888718,00.html> [<http://perma.cc/7XCS-XRWC>] (last visited Nov. 20, 2015) (reporting Kluger’s interview with McCarthy wherein she reiterated the already soundly disproved vaccine-autism link).

¹⁷⁷ Gregory A. Poland & Robert M. Jacobson, *Understanding Those Who Do Not Understand: A Brief Review of the Anti-Vaccine Movement*, 19 VACCINE 240, 243 (2001).

¹⁷⁸ Kata, *supra* note 123, at 3783.

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

“So many people can’t all be wrong.”¹⁸² This trope asserts that truth accompanies the masses when “so many” people have made a certain claim or chosen not to vaccinate their children.¹⁸³ Websites also publish petitions with signatures of “doctors” who are opposed to vaccines, without revealing whether the “doctors” are mainstream medical doctors, members of fringe activist groups, or others whose degrees are in non-science fields.¹⁸⁴

“You’re in the pocket of Big Pharma.”¹⁸⁵ A common thread alleges that vaccine proponents—labeled “shills”—are motivated by profit and are somehow connected to pharmaceutical companies that manufacture vaccines.¹⁸⁶ This belies the trend of vaccine manufacturers to withdraw from the market due to vaccines’ lack of profitability and the much greater profit manufacturers derived from drugs that treat the vaccine-preventable diseases.¹⁸⁷

“I don’t believe in coincidences.”¹⁸⁸ This trope ignores the statistical maxim that near simultaneity does not equate to causation. Coincident vaccine administration and diagnosis of autism are unrelated.¹⁸⁹ Anti-vaccination advocates continue to point to this apparent temporal juxtaposition as proof of causation rather than recognizing that expanded diagnostic criteria have changed the apparent incidence of autism through increased diagnosis.¹⁹⁰

“I am an expert in my own child.”¹⁹¹ While denigrating and discounting vaccine researchers and other medical experts, anti-vaccine advocates generate emotional appeals for parents to “do your

¹⁸² *Id.* at 3783-84.

¹⁸³ *Id.*

¹⁸⁴ *Id.* “Doctors” who have degrees in non-medical fields are usually only referred to as “doctors” and nature of their degrees go unmentioned; readers are not told that these “doctors” are not physicians and that they are not medically trained.
Id.

¹⁸⁵ *Id.* “Big Pharma” refers to all pharmaceutical developers and manufacturers in the aggregate.

¹⁸⁶ *Id.*; Bean, *supra* note 145, at 1877.

¹⁸⁷ Paul A. Offitt, *Why are Pharmaceutical Companies Gradually Abandoning Vaccines?*, 24 HEALTH AFF. 622, 623 (2005).

¹⁸⁸ Kata, *supra* note 123, at 3784.

¹⁸⁹ Taylor, *supra* note 90, at 3628.

¹⁹⁰ Kata, *supra* note 123, at 3784. This is the maxim of *post hoc, ergo propter hoc*: that literally means “after this, therefore because of this”—connecting unrelated events solely because they are temporally linked.

¹⁹¹ *Id.*

own research” and make vaccination decisions for their children based on their newly acquired knowledge—also implying that individual children are unique and that a mother knows her child better than someone trained in the medical sciences.¹⁹² Shunning vaccination, often in favor of alternative treatments, is touted as the best way to protect children.¹⁹³

Parental testimony. Parent testimonials are a common feature of anti-vaccine websites.¹⁹⁴ One such testimonial to a national audience that reached millions of viewers was by actress/model-turned-vaccine/autism-spokesperson Jennifer McCarthy on the September 18, 2007, Oprah Winfrey Show where she said, in part:

McCARTHY: First thing I did—Google. I put in autism. And I started my research.

WINFREY: Thank God for Google.

*McCARTHY: The University of Google is where I got my degree from. . . . And I put in autism and something came up that changed my life, that led me on this road to recovery, which said autism—it was in the corner of the screen—is reversible and treatable. . . . My science is named Evan, and he’s at home. That’s my science.*¹⁹⁵

This exchange illustrates the convergence of two social media factors: (1) the ready availability of unverified information through search engines, and (2) the ability to glean information—even if found in an inconspicuous place such as the corner of the screen—and place great weight on that information without regard to whether it is factual or accurate. It also illustrates the anti-vaccine advocates’ mantra that people without a science background can “become educated” through information obtained on the Internet, and that this education will allow parents to make informed decisions about complex medical issues because they know their children better than do the medical scientists and physicians.

¹⁹² *Id.*

¹⁹³ Kata, *supra* note 133, at 1713.

¹⁹⁴ Bean, *supra* note 145, at 1878.

¹⁹⁵ Seth Mnookin, *Jenny McCarthy’s Mommy Instinct*, THE PANIC VIRUS 252-56 (2011).

3. The Appeal of Alternative Medicine

Two surveys of vaccine-related websites found 88%¹⁹⁶ and 70%¹⁹⁷ of sites specifically mentioned alternative medicine as a viable alternative to vaccines. One site stated, “Homeopathy is noted for its success with vaccine damage recovery and to successfully prevent and treat the diseases of smallpox, measles, whooping cough, chickenpox, anthrax, etc.”¹⁹⁸ Homeopathic views—that differ from conventionally held evidence of immunological principles and immunization practice—strongly influence parents to avoid vaccination because they can be persuaded that vaccines harm the immune system.¹⁹⁹ Another researcher noted that “[a]nti-vaccination websites tended to reject scientific, clinical, and epidemiological studies demonstrating the safety and efficacy of vaccines. Pro-vaccination studies were criticized as unreliable and conducted by those with vested interests in vaccination.”²⁰⁰

B. Homeopathy: Water As an Alternative to Vaccines

Homeopathy was created by Samuel Hahnemann in the late 18th century—more than a hundred years before bacteria were found to cause disease—as a way of keeping human body life forces in balance.²⁰¹ Hahnemann contended that a normally toxic substance—such as body fluid from a person already infected—could be diluted to such an extreme extent that none of the original substance remained but the water molecules somehow retained a sufficiently strong and pharmacologically active memory of the substance that the person who consumed the water would be protected from that illness by its influence.²⁰² Homeopaths offer no proof of this illusory memory nor a reason why the imagined memory is only of the homeopathic

¹⁹⁶ Kata, *supra* note 133, at 1713; Bean, *supra* note 145, at 1877.

¹⁹⁷ Wolfe, *supra* note 130, at 3247; Bean, *supra* note 145, at 1877.

¹⁹⁸ Shirley Lipschutz-Robinson, *Vaccination Warning, Immunization Side Effects, Injury or Death*, SHIRLEY’S WELLNESS CAFÉ, <http://www.shirleys-wellness-cafe.com/Vaccines/Vaccines> [<http://perma.cc/WMM5-FKDW>] (last visited Nov. 20, 2015).

¹⁹⁹ J. A. Cassell, *Is the Cultural Context of MMR Rejection a Key to an Effective Public Health Discourse?*, 120 PUB. HEALTH 783, 793 (2006).

²⁰⁰ Kata, *supra* note 133, at 1712.

²⁰¹ CHRISTINE ADAMS, HOMEOPATHIC MEDICINE 9-10 (2015); *see generally* ANDREW LOCKIE & NICOLA GEDDES, A COMPLETE GUIDE TO HOMEOPATHY 10-17 (1995).

²⁰² Adams, *supra* note 202, at 11.

substance and not of all substances with which the water molecules have ever interacted. One article proposed that mysterious and irreproducible nanoparticles somehow materialized and became the active ingredient following dilution.²⁰³

Hahnemann also devised scientific-sounding names for the dilution process. “Potentization” or “dynamization” is the process by which a solution is diluted to increase its potency, and “succussion” refers to the method by which a dilution is shaken to “strengthen its affinity for the life force.”²⁰⁴

The potency of a homeopathic remedy is said to paradoxically increase when successively diluted.²⁰⁵ Substances are placed into a solution using a process homeopaths call “trituration,” ostensibly to ensure all substances are dissolved.²⁰⁶ Serial 1:100 dilutions are performed until the desired dilution is achieved.²⁰⁷ Common dilution “strengths” are abbreviated as, for example, 30K, meaning the 1:100 dilution was performed 30 times.²⁰⁸ This would yield a dilution of $1:10^{60}$, where only 1,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000th of the active substance would remain. By comparison, there are 4.5×10^{46} molecules of water in all the oceans on earth, leaving a 30K homeopathic remedy still 10^{14} more dilute.²⁰⁹ In practical terms, beyond a dilution of 12K (a $1:10^{24}$ dilution), no active ingredient remains, leaving only water in homeopathic remedies.²¹⁰ Bona fide researchers have called

²⁰³ Prashant S. Chikramane, *Extreme Homeopathic Dilutions Retain Starting Materials: A Nonoparticulate Perspective*, 99 HOMEOPATHY 231, 231, 242 (2010).

²⁰⁴ Adams, *supra* note 202, at 11, 19.

²⁰⁵ LOCKIE, *supra* note 202, at 21.

²⁰⁶ *Id.* at 20.

²⁰⁷ Adams, *supra* note 202, at 21.

²⁰⁸ *Id.*

²⁰⁹ B.W. Eakins and G.F. Sharman, *Volumes of the World's Oceans from ETOPI*, NAT'L OCEANOGRAPHIC AND ATMOSPHERIC ADMIN., NAT'L CTRS. FOR ENVTL. INFO., http://www.ngdc.noaa.gov/mgg/global/etop1_ocean_volumes.html [<http://perma.cc/63U6-NJAR>] (last visited Nov. 20, 2015). The ocean volume of $1.33 \times 10^9 \text{ km}^3$, multiplied 1×10^{12} liters per km^3 , multiplied by 55.5 moles per liter, multiplied by 6.02×10^{23} (Avogadro's number) = 4.5×10^{46} molecules of water in all the earth's oceans.

²¹⁰ LOCKIE, *supra* note 202, at 21.

homeopathy's "high-dilution" experiments "delusional" because they cannot possibly contain any of the undiluted starting material.²¹¹

Nevertheless, even without any active ingredient in their remedies, homeopathic practitioners claim these remedies prevent and cure a wide variety of illnesses. One site asserts, "Homeoprophylaxis offers a safe and effective alternative to vaccination. The effectiveness of homeopathic remedies cannot be explained in terms of the materialistic paradigm of modern medicine; we are far more than just our physical bodies."²¹² Another site refers to vaccines as "chemical drugs in crude doses" and states that "the crude quantity of virus material [is] injected directly into a person's bloodstream."²¹³ Conventional immunizations are not, of course, injected into the bloodstream; they are either injected subcutaneously—just below the skin—or intramuscularly—deep into a bulky muscle.²¹⁴

A homeopathic site with the impressive name of Hahnemann Center for Heilkunst²¹⁵ & Homeopathy,²¹⁶ says,

The homeopathic immunization, on the contrary, provides an oral dose of an infinitesimal amount of the virus material alone, which does not shock the system. By following natural laws, is able to reach deeply into the cellular and energetic levels of the patient and stimulate a more wholistic [sic] immune response, without risk to the filtering systems (kidneys, liver) of the body or of generating any auto-immune response, such as allergies. Because it is processed through the

²¹¹ John Maddox et al., "High-Dilution" Experiments a Delusion, 334 NATURE 287, 287 (1988).

²¹² Pratt, *supra* note 5.

²¹³ Patty Smith-Verspoor, *Homeopathic Flu Vaccine Information vs. Chemical Drug Injections*, HAHNEMANN CTR. FOR HEILKUNST & HOMEOPATHY, <http://www.homeopathy.com/clinic/168/homeopathic-flu-vaccine-information-vs-chemical-drug-injections> [<http://perma.cc/8G9V-ERZ6>] (last visited Nov. 20, 2015).

²¹⁴ Schuchat, *supra* note 29, at 791.

²¹⁵ Heilkunst is a German word used by Hahnemann to mean "a profound state of spiritual evolution and health that allows each person to fulfill their divine purpose in life." Patty Smith-Verspoor, *What is Heilkunst*, HAHNEMANN CTR. FOR HEILKUNST & HOMEOPATHY, <http://www.homeopathy.com/college/19/what-is-heilkunst> [<http://perma.cc/KJ55-VG5K>] (last visited Nov. 20, 2015).

²¹⁶ Verspoor, *supra* note 214.

*mucous membranes as it would be if the virus were contracted in nature its acting as more wholistic [sic].*²¹⁷

...

*[H]omeopathic flu vaccine—this oral vaccine is a safe and effective alternative to the toxic medical injectable vaccine. It has no side effects—only side benefits! Contrast that with the adverse events reported from the flu shot (these references, and many more, available): [here, the article lists and describes myriad side effects that have ever been reported after influenza vaccination].*²¹⁸

Another homeopathic website claims,

*Homeopathy acts by virtue of a resonance between the energy pattern of the remedy and the person's energy body. They do work if your child is brewing up an infection. Remedies work by rebalancing your energy body when it is already destabilised by coming into contact with an illness. When you are in a particular pattern of illness, then the correct remedy will help you. But if your pattern does not match the curative pattern of a remedy (we call this a 'proving')—then taking articular remedy will do nothing for you. The art of homeopathy is that of matching the remedy patterns to your own.*²¹⁹

The website author explains that a class of remedies is prepared from actual byproducts of disease (samples of sputum from patients infected with pertussis in this case); these alternatives to immunizations are termed “nosodes” and are created by using the dilution process described, *supra*.²²⁰ Another website author explains that nosodes “are homeopathic remedies made from specific products of a particular disease [and] can be tissue containing actual disease

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ Cassandra Marks, *Alternative to Immunization*, <http://www.whale.to/vaccines/marks.html> [<http://perma.cc/SVQ4-8Q8N>] (last visited Nov. 20, 2015).

²²⁰ *Id.*

agents or tissue affected by those agents. Sometimes nosodes are made from vaccines containing the organisms. The nosodes are prepared in a diluted and potentized form like all other homeopathic medicine.”²²¹

Nosodes have been highly publicized in Canada where public concern has caused the Minister of Health to release a statement prescribing a strong warning label:

*Today, all nosode product license holders are being made aware of this change. They are requested to include a new statement on nosode labels: “This product is neither a vaccine nor an alternative to vaccination. This product has not been proven to prevent infection. Health Canada does not recommend its use in children and advises that your child receive all routine vaccinations.” Nosode license holders have been asked to comply with the new labeling changes by January 2016.*²²²

There is no similar warning in the United States.

In 1992, Congress established the Office of Alternative Medicine (OAM) whose mission was “to explore complementary and alternative healing practices in the context of rigorous science.”²²³ Several members of Congress hoped to validate their own beliefs in alternative therapies.²²⁴ In 1999, the OAM moved under the umbrella of the National Institutes of Health (NIH), within the Department of Health and Human Services, and was renamed the National Center for Complementary and Alternative Medicine (NCCAM).²²⁵ Even with intense pressure from Members of Congress who controlled NIH’s budget and demanded proof alternative treatments were efficacious, NCCAM “failed to prove that complementary or alternative therapies are anything more than placebos” and, after spending \$1.6 billion,

²²¹ Robinson, *supra* note 5.

²²² Rona Ambrose, *Statement From the Minister of Health on Labeling Changes for Certain Homeopathic Products*, GOV’T OF CANADA, (July 31, 2015), <http://news.gc.ca/web/article-en.do?nid=1014019> [<http://perma.cc/TV8A-WNQW>].

²²³ Paul A. Offitt, *Studying Complementary and Alternative Therapies*, 307 J. AM. MED. ASS’N 1803, 1803 (2012).

²²⁴ *Id.*

²²⁵ *Id.*

recommended no further studies be conducted on “biologically implausible hypotheses.”²²⁶

Seeking to validate any efficacy of homeopathic medicines, the homeopathic community was quick to celebrate one sentence in a 1997 article that hinted at some therapeutic activity of homeopathic remedies: “The results of our meta-analysis are not compatible with the hypothesis that the clinical effects of homeopathy are completely due to placebo.”²²⁷ They ignore, however, the next sentence that stated, “However, we found insufficient evidence from these studies that homeopathy is clearly efficacious for any single clinical condition.”²²⁸ The paper concluded:

*Our study has no major implications for clinical practice because we found little evidence of effectiveness of any single homeopathic approach on any single clinical condition. Our study does, however, have major implications for future research on homeopathy. We believe that a serious effort to research homeopathy is clearly warranted despite its implausibility.*²²⁹

Subsequently, a larger “systematic review of systematic reviews of homeopathy” was conducted, aggregating data from many studies to “critically evaluate all such papers . . . with a view to defining the clinical effectiveness of homeopathic medicines.”²³⁰ The study concluded:

[T]he hypothesis that any given homeopathic remedy leads to clinical effects that are relevantly different from placebo or superior to other control interventions for any medical condition, is not supported by evidence from systematic reviews. Until more compelling results

²²⁶ *Id.*; see also, Eliot Marshal, *The Politics of Alternative Medicine*, 265 SCIENCE 2000, 2000-02 (1994).

²²⁷ Klaus Linde et al., *Are the Clinical Effects of Homeopathy Placebo Effects?*, 350 THE LANCET 834, 834 (1997).

²²⁸ *Id.*

²²⁹ *Id.* at 840.

²³⁰ E. Ernst, *A Systematic Review of Systematic Reviews of Homeopathy*, 54 BRIT. J. CLIN. PHARMACOL. 577, 577 (2002).

*are available, homeopathy cannot be viewed as an evidence-based form of therapy.*²³¹

Unlike in Canada where the Minister of Health's office has the authority to regulate the alternative medicine industry, the U.S. alternative medicine industry is not currently regulated by the Food and Drug Administration (FDA).²³² However, during recent Congressional hearings, the FDA has testified about labeling and regulating homeopathic products.²³³ The monetary impact is staggering: Americans annually pay \$2.9 billion for alternative medicine therapies.²³⁴

"[I]t seems that some people believe what they want to believe, arguing that it does not matter what the data show; they know what works for them."²³⁵ But it does matter.²³⁶

C. The Costs

In America, where people cherish their freedom of choice—even the freedom to make bad choices—the above philosophy might be considered harmless if applied to many other activities. However, vaccine avoidance directly affects those who remain unprotected from

²³¹ *Id.* at 581.

²³² Offitt, *supra* note 224, at 1804.

²³³ Homeopathic Product Regulation for the Food and Drug Administration, 80 FED. REG. 16327 (March 27, 2015) (to be codified as 21 C.F.R. pt. 15).

²³⁴ Richard L. Nahin et al., *Costs of Complementary and Alternative Medicine (CAM) and Frequency of Visits to CAM Practitioners: United States, 2007*, 18 NAT'L HEALTH STAT. REP. 1, 3 (2009).

²³⁵ Offitt, *supra* note 224, at 1804.

²³⁶ See, e.g., Emma Wynne, Parents' fear of vaccinations nearly killed their son, ABC PERTH, (June 6, 2013, 1:33PM), <http://www.abc.net.au/local/stories/2013/06/06/3776327> [<http://perma.cc/FX7B-34NW>]. Parents, one a scientist and the other a nurse midwife, of a seven-year-old boy refused to vaccinate their children. Within days of the boy cutting his foot while outdoors, he started exhibiting signs and symptoms of a tetanus infection: severe pain, cramping, involuntary rigidity in all his skeletal muscles, and consequent inability to breathe. He got a tracheostomy and was placed into a medically induced coma where he laid for three weeks. "We felt terrible. . . . It was obvious we had made a mistake." "If you Google vaccines you get a lot of pros and a lot of cons, and you start to read all the cons and they start to weigh on you and you start to believe all the things that are said. It looks like a fifty-fifty argument. There are a number of myths out there, and it's really easy to get sucked in. As soon as they said it was tetanus my other two kids were vaccinated the very next day, against all childhood diseases." *Id.*

vaccine-preventable diseases and collectively weakens the herd immunity that protects those who cannot be protected by vaccination.

1. Morbidity, Mortality, and Lifetime Effects of Vaccine-Preventable Diseases

As with the first vaccine for smallpox, spurred by a feared and seemingly unrelenting menace, preventive and treatment measures have been designed to address humankind's most pressing health needs. The twentieth and twenty-first centuries have seen dramatic advances in disease prevention based on disease surveillance that has allowed scientists to focus on the most serious needs.²³⁷ "Vaccines and their ability to prevent morbidity and mortality due to infectious diseases have been one of the greatest public health success stories."²³⁸ However,

*[a]s the widespread use of a vaccine diminishes or eliminates the risk of a disease, the public's perception of the vaccines' value paradoxically diminishes because the public no longer observes the disease or its aftermath, and hence perceives little or no benefit. The very success of the vaccine causes its benefit to be diluted or less valued once the disease is no longer considered a high-level threat or risk. Paradoxically, the more effective a vaccine is the more powerful the dilution of benefit effect appears to be.*²³⁹

Yet, except for the world-wide eradication of smallpox and the near eradication of polio, these infectious diseases persist, and the threat of their morbidity, mortality, and lifetime effects remains. The following are examples of consequences when unvaccinated individuals contract some of these diseases.

²³⁷ CTRS. FOR DISEASE CONTROL AND PREVENTION, PUBLIC HEALTH THEN AND NOW, 60 MORBIDITY AND MORTALITY WEEKLY REPORT 15, 20 (2011) (describing the importance of epidemiology in shaping public health policy).

²³⁸ Poland, *supra* note 178, at 2440; *accord* CTRS. FOR DISEASE CONTROL AND PREVENTION, ACHIEVEMENTS IN PUBLIC HEALTH, 1990-1999: IMPACT OF VACCINES UNIVERSALLY RECOMMENDED FOR CHILDREN—UNITED STATES, 1990-1998, 48 MORBIDITY AND MORTALITY WEEKLY REPORT 241, 245 (1999). Table 2 presents a summary of vaccines' dramatic success in decreasing target disease incidence. *Id.*

²³⁹ Poland, *supra* note 178, at 2443.

Measles. Infection with measles causes pneumonia in 6% of cases, seizures in 6–7/1000 cases, encephalitis (infection of the brain) in 1/1000 cases, and death in 2/1000 cases.²⁴⁰

Mumps. Infection with mumps causes orchitis (testicular inflammation that leads to male sterility) in 12–66% of cases, pancreatitis in 3–10% of cases, unilateral deafness in 1/20,000 cases, and death in 1/5000 cases.²⁴¹

Chickenpox. Infection with chickenpox (varicella) causes pneumonia or brain infection requiring hospitalization in 2–3/1000 cases, and death in 1/60,000 cases.²⁴²

Diphtheria. Infection with diphtheria causes inflammation of the heart and brain; death occurs in 5–10% of cases.²⁴³

In all infected individuals, these and other vaccine-preventable illnesses cause morbidity for the duration of the acute illness. Other individuals at risk of contracting these illnesses include those who are voluntarily unvaccinated; those who are vaccinated but, because vaccines are not 100% effective, remain vulnerable; and those who cannot be vaccinated.

Those who cannot be vaccinated include the very young,²⁴⁴ people with known sensitivities or allergies to a vaccine component, are pregnant (some vaccines), and those whose immune systems are compromised by immune system illnesses, such as certain malignancies, HIV, and other conditions that suppress the immune system's ability to respond appropriately to vaccine challenges.²⁴⁵

These vaccine-preventable diseases are very contagious and spread not only to individuals infected by the original case but also to several successive groups of people as the disease spreads through a community.²⁴⁶ Medical practice waiting rooms often contribute to the spread of diseases brought into the area by “[y]oung children [who]

²⁴⁰ CTRS. FOR DISEASE CONTROL AND PREVENTION, EPIDEMIOLOGY AND PREVENTION OF VACCINE-PREVENTABLE DISEASES, 210 (Jennifer Hamborsky et al. eds., 13th ed. 2015).

²⁴¹ *Id.* at 248.

²⁴² *Id.* at 355.

²⁴³ *Id.* at 109.

²⁴⁴ Ctrs. for Disease Control and Prevention, *supra* note 45.

²⁴⁵ Omer, *supra* note 46, at 1984.

²⁴⁶ Amy A. Parker et al., *Implications of a 2005 Measles Outbreak in Indiana for Sustained Elimination of Measles in the United States*, 355 NEW ENGL. J. MED. 447, 450 (2006) (demonstrating in Figure 2 the multi-generational spread of measles, a transmission effect common to all highly infectious diseases).

readily acquire and transmit infections [because t]hey frequently harbour infectious organisms and may shed pathogens, especially respiratory and gastrointestinal viruses, even if asymptomatic.”²⁴⁷

2. Family Economic Losses

Economic losses incurred by caring for an ill child include lost income from work, non-reimbursed expenses from visits with healthcare providers, non-reimbursed expenses for hospitalization, and long-term care if the child develops permanent disabilities. The average cost to a family with a single child who contracts a vaccine-preventable illness requiring quarantine is approximately \$775 per child if the child recovers uneventfully and does not require long-term care or treatment for a permanent resultant disability.²⁴⁸

3. Community Economic Costs

“[S]taging effective responses to measles outbreaks ha[s] a sizable economic impact on local and state public health departments [and t]he costs of measles outbreaks responses are compounded by the duration of outbreaks and the number of potentially susceptible contacts.”²⁴⁹ These costs are borne by local and state health agencies that are unexpectedly required to provide disease assessment; surveille of all exposed or potentially exposed people, initiate and monitor quarantine of infected or potentially infected people, and perform DNA and other laboratory testing to determine the origin of the infection.

In a 2005 outbreak caused by a single index case in Indiana, 500 people were potentially exposed to measles and thirty-four people contracted the illness; 94% percent of those infected were unvaccinated and there were two vaccination failures.²⁵⁰ “[C]ontainment activities involved approximately 3650 person-hours,

²⁴⁷ Infectious Diseases and Immunization Committee, *Infection Control in Paediatric Office Settings*, 13 PAEDIATRICS & CHILD HEALTH 408, 408 (2008).

²⁴⁸ Tara Haelle, *Measles Outbreak in Dollars and Cents: It Costs Taxpayers Bigtime*, FORBES (FEB. 11, 2015), <http://www.forbes.com/sites/tarahaelle/2015/02/11/measles-outbreak-in-dollars-and-cents-it-costs-taxpayers-bigtime/> [http://perma.cc/6KFB-6HAW].

²⁴⁹ Ismael R. Ortega-Sanchez et al., *The Economic Burden of Sixteen Measles Outbreaks on United States Public Health Departments in 2011*, 32 VACCINE 1311, 1316 (2014).

²⁵⁰ Parker, *supra* note 247, at 447 (describing a 17 year-old unvaccinated girl who contracted measles while on a church-sponsored trip to Hungary; she was asymptomatic when she returned to the U.S. and attended a large church gathering, exposing hundreds of parishioners and guests to measles).

4800 telephone calls, 5500 miles driven, and 550 laboratory specimens tested.”²⁵¹ The aggregate “[c]osts of containment totaled \$167,685 (\$4,932 per patient).”²⁵² In addition, a healthcare worker became infected, generating \$113,647 in direct costs to the employing hospital.²⁵³

In a larger series of sixteen outbreaks during 2011, 107 confirmed cases of measles generated between \$2.7 million and \$5.3 million in costs—depending on the number of cases in each outbreak—to local and state public health departments.²⁵⁴

Healthcare institutions also incur costs that may not be fully reimbursed by insurance. Even if reimbursed, insurers nevertheless indirectly bear the costs. State and federal benefit programs also reimburse hospitals for care to eligible beneficiaries. Schools must take special measures to ensure exposed or potentially exposed students, faculty, and other personnel are adequately protected. These costs are less well quantified but, nonetheless impact the organizations and institutions where people gather.

False and misleading website statements that encourage individuals to shun vaccination have far-reaching impact on adversely affected individuals, families, and communities.

²⁵¹ *Id.* at 452.

²⁵² *Id.*

²⁵³ *Id.*

²⁵⁴ Ortega-Sanchez, *supra* note 250, at 1311, 1314-15.

V. APPLYING THE LAWS OF MISREPRESENTATION

*The Law is for Protection of the People.*²⁵⁵

*But there is no constitutional value in false statements of fact. Neither the intentional lie nor the careless error materially advances society's interest in "uninhibited, robust, and wide-open" debate on public issues.*²⁵⁶

This Part outlines the general theory of tortious misrepresentation and potential plaintiffs; discusses the relevant fraudulent and negligent misrepresentation tort actions and their specific scienter requirements under the Restatement (Second) of Torts; examines the common elements of privity, causation, and damages; and summarizes the pros and cons of available defenses.

Two websites, Mercola.com and ImmunizationAlternatives.com, are used as illustrations of content that may represent fraudulent misrepresentation and negligent misrepresentation, respectively. They were selected because of the richness of their content and the clarity of their representations.

A. General Theory and Potential Plaintiffs

A misrepresentation is a false assertion of fact.²⁵⁷ Standing alone, a misrepresentation can be harmless. However, when a person intentionally, recklessly, or negligently misrepresents a material fact to induce another person to act or refrain from an acting, tort liability may attach if the other person or a third person suffers harm as a result of reliance on the misrepresentation.²⁵⁸ A fact is material if "the matter is such that it would be given weight in the plaintiff's decision-making process. This may be true either because a reasonable person would attach importance to the facts or because the defendant knows that the

²⁵⁵ KRIS KRISTOFFERSON, *The Law is for Protection of the People*, on ME AND BOBBY MCGEE (Monument Records 1970) ("The law is for protection of the people, rules are rules and any fool can see . . .").

²⁵⁶ *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 340 (1974) (quoting *New York Times Co. v. Sullivan*, 376 U.S. 254, 270 (1964)).

²⁵⁷ *Misrepresentation*, BLACK'S LAW DICTIONARY 1152 (10th ed. 2014) ("1. The act of making a false or misleading assertion about something, usu[ally] with the intent to deceive. • The word denotes not just written or spoken words but also any other conduct that amounts to a false assertion. 2. The assertion so made; an assertion that does not accord with the facts.").

²⁵⁸ RESTATEMENT (SECOND) OF TORTS § 525 (AM. LAW INST. 1977).

matter is important to the plaintiff.”²⁵⁹ Further, the “misrepresentation normally must induce the plaintiff to enter into a transaction, or sometimes to avoid a transaction.”²⁶⁰

This Article argues that tort liability attaches to publishers of commercial websites for foreseeable harm that results when websites dissuade parents from vaccinating their children in favor of purchasing products offered for sale on the websites. Restatement (Second) of Torts sections 310,²⁶¹ and 525²⁶² provide guidance when contending fraud through intentional or reckless misrepresentation. Sections 311²⁶³ and 552²⁶⁴ provide guidance when alleging negligent misrepresentation. The harm may result directly to the person who accepted and acted on the misrepresentation or to a third party whom “the actor [the person making the misrepresentation] should expect to be put in peril by the action taken.”²⁶⁵

Potential victim-plaintiffs include (1) voluntarily unvaccinated children who contract a vaccine-preventable disease, (2) persons who contract a vaccine-preventable disease from a voluntarily unvaccinated person, and (3) parents of children who contract a vaccine-preventable disease. Although others may be harmed consequent to a vaccine-preventable disease outbreak, these three categories represent the first tier of those harmed by the outbreak and most likely to successfully bring a tort action for misrepresentation.

1. Voluntarily unvaccinated children who contract a vaccine-preventable disease. This group includes children who are imperiled when their parents accept and act on a website’s misrepresentation of facts about vaccinations and, as a direct result, do not vaccinate their children against vaccine-preventable illnesses. Actionable harm occurs when the child contracts the illness and thereby suffers morbidity.

²⁵⁹ VINCENT R. JOHNSON, *ADVANCED TORT LAW: A PROBLEM APPROACH* 14–15 (2d ed. 2010); *Doe v. Dilling*, 888 N.E.2d 24, 35 (Ill. 2008).

²⁶⁰ DAN B. DOBBS ET AL., *THE LAW OF TORTS* § 662 (2d ed. 2011).

²⁶¹ RESTATEMENT (SECOND) OF TORTS § 310 (AM. LAW INST. 1965).

²⁶² RESTATEMENT (SECOND) OF TORTS § 525 (AM. LAW INST. 1977).

²⁶³ RESTATEMENT (SECOND) OF TORTS § 311 (AM. LAW INST. 1965).

²⁶⁴ RESTATEMENT (SECOND) OF TORTS § 552 (AM. LAW INST. 1977).

²⁶⁵ RESTATEMENT (SECOND) OF TORTS § 311 cmt. b (AM. LAW INST. 1965).

2. Persons who contract a vaccine-preventable disease from a voluntarily unvaccinated person. Since vaccines are not 100% effective in producing immunity, a small proportion of those who are vaccinated will remain susceptible to infection through no fault of their own and may contract the illness.²⁶⁶ These individuals could contract the infection directly from an infected person or as a secondary result of reduced herd immunity. Unvaccinated individuals increase the risk if infectious disease spread by reducing herd immunity when a sufficient number of people in a community are not immunized.²⁶⁷ Without effective herd immunity, other susceptible members of the community are more likely to become infected.²⁶⁸ Additionally, some individuals cannot be vaccinated because they are too young,²⁶⁹ have known sensitivities or allergies to a vaccine component, are pregnant (some vaccines), and have immune systems compromising illnesses.²⁷⁰

3. Parents of children who contract a vaccine-preventable disease. Parents of children who contract a vaccine-preventable illness suffer financial losses and emotional impact when their child becomes ill. These direct costs are discussed in Part IV.C.2 above.

B. Fraudulent Misrepresentation

The tort of fraudulent misrepresentation involves harm caused by intentional misrepresentation of fact or misrepresentation due to a reckless disregard for evidence in disagreement with information presented as factual.²⁷¹ The resultant harm could be physical, in which case Restatement (Second) of Torts section 310²⁷² would apply; or

²⁶⁶ Heininger, *supra* note 44, at 1266.

²⁶⁷ Fine, *supra* note 47, at 911.

²⁶⁸ *Id.*

²⁶⁹ Ctrs. for Disease Control and Prevention, *supra* note 45.

²⁷⁰ Examples of immune system compromising illnesses are certain malignancies, human immunodeficiency virus (HIV), and other conditions that suppress the immune system's ability to respond appropriately to vaccine challenges. OMER, *supra* note 46, at 1984.

²⁷¹ RESTATEMENT (SECOND) OF TORTS § 526 (AM. LAW INST. 1977).

²⁷² RESTATEMENT (SECOND) OF TORTS § 310 (AM. LAW INST. 1965).

economic, in which case Restatement (Second) of Torts section 525²⁷³ would apply. Although “fraudulent misrepresentation has been traditionally considered a stand-alone economic or commercial tort,” emotional, rather than physical or economic harm, also has been compensated in some jurisdictions.²⁷⁴

An action for fraud has five generally accepted elements that are required for a prima facie case: (1) a material misrepresentation of fact, (2) made with “knowledge of the falsity or reckless disregard for the truth,” that (3) caused intended or expected reliance, and (4) was “justifiably relied upon,” (5) by someone who was economically or physically harmed as a result of the reliance.²⁷⁵ Each element will be discussed separately below.

Element 1: Material misrepresentation of fact: the falsity. As described in Parts IV.A.1. (Tactics) and IV.A.2. (Tropes) above, the websites at issue ignore valid, reproducible, peer-reviewed scientific evidence and, instead, publish information knowingly untrue or with a reckless disregard for the truth.

For example, Joseph Mercola is an osteopathic physician whose website²⁷⁶ vaccine page²⁷⁷ offers educational articles and videos. A disclaimer at the bottom of each page informs readers that the website contents are Dr. Mercola’s opinions. Webpages include the following:

- “Vaccination Dangers Can Kill You or Ruin Your Life.”²⁷⁸

²⁷³ RESTATEMENT (SECOND) OF TORTS § 525 (AM. LAW INST. 1977).

²⁷⁴ Doe v. Dilling, 888 N.E.2d 24, 36 (Ill. 2008); Andrew L. Merritt, *Damages for Emotional Distress in Fraud Litigation: Dignitary Torts in a Commercial Society*, 42 VAND. L. REV. 1, n. 11 (1969) (“Jurisdictions that specifically have addressed the award of emotional distress damages are divided almost evenly between those denying recovery and those supporting recovery.”).

²⁷⁵ JOHNSON, *supra* note 260, at 14-15.

²⁷⁶ Joseph M. Mercola, *Current Health News*, <http://www.mercola.com> [<http://perma.cc/JQC2-M2R9>] (last visited Nov. 20, 2015).

²⁷⁷ Joseph M. Mercola, *Vaccine Articles*, MERCOLA.COM, <http://www.vaccines.mercola.com> [<https://perma.cc/K3YM-DH5C>] (last visited Nov. 20, 2015).

²⁷⁸ Joseph M. Mercola, *Vaccination Dangers Can Kill You or Ruin Your Life*, MERCOLA.COM (May 12, 2004), <http://articles.mercola.com/sites/articles/archive/2004/05/12/vaccination-dangers.aspx> [<http://perma.cc/X6FX-XSBV>]. On this page, Dr. Mercola claims vaccines cause autism, attention deficit disorder, attention deficit hyperactivity disorder, Gulf War syndrome, Parkinson’s disease, Alzheimer’s dementia, and amyotrophic lateral sclerosis (Lou Gehrig’s disease).

- “New Warning About Everyday Poison Linked to Alzheimer’s, ADHD, and Autism.”²⁷⁹
- “New Study Demonstrates Significant Harm From Just ONE Mercury-Containing Vaccine.”²⁸⁰
- “Groundbreaking Study: Vaccines Cause Children More Adverse Reactions Than Any Other Drug.”²⁸¹

On the foregoing webpages and others similar, Dr. Mercola publishes many unsupported contentions—that have been extensively studied and debunked—as facts and reasons to avoid vaccination. Therefore, the published information, singularly and in aggregate, constitutes material misrepresentations of facts.

Element 2: The publisher had knowledge of the falsity or recklessly disregarded the truth. The Restatement (Second) of Torts explains:

[A m]isrepresentation is fraudulent when the speaker (a) knows or believes that the matter is not as he represents it to be, (b) does not have the confidence in the accuracy of his representation that he states or

²⁷⁹ Joseph M. Mercola, *New Warning About Everyday Poison Linked to Alzheimer’s, ADHD, and Autism*, MERCOLA.COM (Mar. 20, 2010), <http://articles.mercola.com/sites/articles/archive/2010/03/20/david-ayoub-interview-february-2010.aspx> [<http://perma.cc/54M2-F6ZV>]. On this page, Dr. Mercola claims aluminum in vaccines causes heavy metal toxicity, ignoring the orders of magnitude larger exposure through ingestion of ordinary foods compared to the trace amount in some vaccines.

²⁸⁰ Joseph M. Mercola, *New Study Demonstrates Significant Harm From Just ONE Mercury-Containing Vaccine*, MERCOLA.COM (Oct. 22, 2009), <http://articles.mercola.com/sites/articles/archive/2009/10/22/new-study-demonstrates-significant-harm-from-just-one-mercury-containing-vaccine.aspx> [<http://perma.cc/Y2UE-6FDN>] (emphasis in the original). Eight years after the trace amounts of a non-toxic form of mercury were removed from vaccines, Dr. Mercola uses decades-old information to claim mercury remains in most vaccines and causes significant neurological and other damage.

²⁸¹ Joseph M. Mercola, *Groundbreaking Study: Vaccines Cause Children More Adverse Reactions Than Any Other Drug*, MERCOLA.COM (Apr. 04, 2014), http://articles.mercola.com/sites/articles/archive/2014/04/26/vaccines-adverse-reaction.aspx?i_cid=cse-tbd-vaccines-content [<http://perma.cc/TGU9-4CTT>]. On this page, Dr. Mercola uses a Chinese study that is published only online and compares the raw rate of side effect from vaccines with rates of serious side effects from all other “drugs” as published in other unrelated studies. Dr. Mercola mixes numerator data from one study with denominator data from another study of different cohorts to make blanket claims that are inconsistent with the aggregate data.

*implies, or (c) knows that he does not have the basis for his representation that he states or implies.*²⁸²

The published “facts” on Dr. Mercola’s website have been systematically refuted in the medical and scientific literature.²⁸³ Nevertheless, Mercola presents them as if they had not been researched or the purported connection of vaccines with the disorders he mentions has not been well enough studied. He asserts the reason is alleged government and pharmaceutical company conspiracies.

The refutations of Dr. Mercola’s published facts are found in the medical and scientific literature. However, Dr. Mercola has ignored the body of mainstream evidence and has published alternate and unsubstantiated conjecture as fact. Of these scientific and medical research studies, Dr. Mercola says:

But clinical trials conducted by heavily biased “researchers,” advertisements, and news stories carefully scripted to scare you into belief, highly polished corporate offices and corporate websites, and an extreme focus on whatever has the most profit potential—not lifesaving or life-enhancing potential—are not qualifications. They are scams. Don’t fall for them.²⁸⁴

Based on this statement, combined with informational material that vilifies modern medicine’s approach to vaccinations, Dr. Mercola might not be able to escape the conclusion that the treatments he calls “‘non-conventional’ may well necessitate a finding that [he] who practices such medicine deviates from ‘accepted’ medical standards.”²⁸⁵

Misrepresentations of fact are actionable if they cause an intended or expected party to rely to her detriment. In *Charell v. Gonzalez*, after a woman with a uterine cancer had a hysterectomy and was told her treatment would require radiation and chemotherapy, she sought a “second opinion” from a naturopath who recommended against conventional treatment and, instead, convinced her to use a natural

²⁸² RESTATEMENT (SECOND) OF TORTS § 526 (AM. LAW INST. 1977).

²⁸³ See *supra* Part III and accompanying text.

²⁸⁴ Joseph M. Mercola, *About Dr. Mercola*, <http://www.mercola.com/forms/background.htm> [<http://perma.cc/95FB-FMBM>] (last visited Nov. 20, 2015).

²⁸⁵ *Charell v. Gonzalez*, 660 N.Y.S.2d 665, 665-68 (Sup. Ct. 1997) (holding defendant naturopath was negligent in convincing a cancer patient to forego conventional therapy and, instead, purchase nutritional supplements from which the naturopath directly profited).

treatment instead.²⁸⁶ The treatment consisted of a special diet, coffee enemas, and supplements purchased from the naturopath.²⁸⁷ The plaintiff testified that the naturopath never told her that he was not an oncologist and that the treatment was not generally accepted in the medical community but, instead, told her the natural treatment was 75% successful in similar cancers.²⁸⁸ Plaintiff brought suit when her cancer returned, causing blindness and other permanent disabilities. The court held the naturopath was 51% at fault and plaintiff 49% at fault and awarded damages for past and future pain and suffering as well as punitive damages.²⁸⁹ *Charell* would be analogous to the facts in a suit for fraudulent misrepresentation against Dr. Mercola. Like *Charell*, where the alternative medicine provider said traditional treatment couldn't be trusted and that his treatment was superior to mainstream medical treatments, Dr. Mercola presents copious information disparaging well-accepted vaccinations and offering alternative treatments that contain no medically-active ingredient.²⁹⁰

In another case, *In the Matter of Nature's Bounty, Inc., et al.*, the court held that advertisements about the contents and efficacy of health supplements were false and misleading because the "respondents did not possess and rely upon a reasonable basis that substantiated such representations."²⁹¹ Similarly, Dr. Mercola relies on a variety of tactics, tropes, and unsupported conjecture to present unsubstantiated information antithetical to scientifically supported medical practices.

Therefore, Dr. Mercola's publications will most likely fulfill the element of being knowingly false or demonstrating a reckless disregard for and concealment of the truth.

Element 3: The misinformation was intended or expected to cause reliance. Potential plaintiffs who are victims of fraudulent misrepresentation include all whom the publisher "intends or has reason to expect to act or refrain from action in reliance upon the misrepresentation."²⁹² Third party liability attaches when the publisher

²⁸⁶ *Id.* at 666.

²⁸⁷ *Id.*

²⁸⁸ *Id.*

²⁸⁹ *Id.* at 667. New York is a pure comparative negligence state.

²⁹⁰ See *supra* Part IV.B and accompanying text.

²⁹¹ *In re Nature's Bounty, Inc.*, 120 F.T.C. 206, 212 (1995).

²⁹² RESTATEMENT (SECOND) OF TORTS § 531 (AM. LAW INST. 1977).

“intends or has reason to expect” the information or effect of the information will reach a third party.²⁹³

Dr. Mercola claims his website is “The World’s #1 Natural Health Site.”²⁹⁴ Although portrayed as informational, the website material is interlaced with advertisements and large mid-screen pop-up reminders exhorting readers to subscribe and visit the online store.²⁹⁵ The site’s many articles and videos claiming vaccines are ineffective and harmful are followed by advice to purchase alternative products from Dr. Mercola’s online store in lieu of vaccination.²⁹⁶ For example, a page entitled “Help Knock Out Your Baby’s Health Enemies - Use Probiotic Supplements” claims an intestinal malady called “Gut and Psychology Syndrome” (GAPS), unrecognized mainstream medicine²⁹⁷, adversely affects babies and,

[a]dding a vaccine that further stresses your baby’s immature immune system is like adding fuel to a fire—conditions that raise your child’s risk for a major adverse vaccine reaction. In other words, a vaccine could be the proverbial “final straw” if your baby has

²⁹³ RESTATEMENT (SECOND) OF TORTS § 533 (AM. LAW INST. 1977).

²⁹⁴ This statement appears at the bottom of every Mercola.com website page. *See, e.g.,* Joseph M. Mercola, *Vaccine Articles*, MERCOLA.COM, <http://vaccines.mercola.com> [<https://perma.cc/ZG3E-CDWN>] (last visited Jan. 29, 2016).

²⁹⁵ *See, e.g.,* Joseph M. Mercola, *Getting Polio from the Polio Vaccine*, MERCOLA.COM (Sept. 8, 2015), <http://articles.mercola.com/sites/articles/archive/2015/09/08/polio-vaccines.aspx> [<http://perma.cc/L8M3-AVK6>].

²⁹⁶ Joseph M. Mercola, *Alternatives to the Flu Vaccine*, MERCOLA.COM (Dec. 13, 2003), <http://articles.mercola.com/sites/articles/archive/2003/12/13/flu-vaccine.aspx> [<http://perma.cc/XQ4U-B642>].

²⁹⁷ The World Health Organization (WHO) International Classification of Diseases (ICD) is “the standard diagnostic tool for epidemiology, health management and clinical purposes” used by all WHO member states, including the United States, to name and classify “diseases and other health problems.” WORLD HEALTH ORG., *International Classification of Diseases (ICD)*, <http://www.who.int/classifications/icd/en/> [<http://perma.cc/EDD3-7DLH>] (last visited Nov. 20, 2015). “Gut and Psychology Syndrome” is not an internationally recognized illness. *ICD online query, ICD-10 Version: 2016*, WHO.COM <http://apps.who.int/classifications/icd10/browse/2016/en> [<http://perma.cc/EBM9-HEQX>] (last visited Nov. 20, 2015) (enter search term in search box).

*GAPS. But all of this may be corrected, or even averted, by the addition of some natural probiotics.*²⁹⁸

A link to “Gut and Psychology Syndrome” in the text of the preceding web page opens a new page entitled “GAPS Nutritional Program: How a Physician Cured Her Son’s Autism...”²⁹⁹ On this page, readers are told how to diagnose GAPS in their own children and why vaccines are dangerous in children with this fictional syndrome.³⁰⁰

On yet another page entitled “Alternatives to the Flu Vaccine,” Dr. Mercola advises avoiding the flu shot in favor of purchasing his natural supplements.³⁰¹ Toward the end of the page, Dr. Mercola offers this guarantee: “I am a licensed physician who has dedicated over twenty years to developing this dietary program, and literally tens of thousands of patients have been helped by it at my clinic. So when I say I GUARANTEE you that this is the answer, I mean it literally.”³⁰²

Every page on the Mercola website contains advertisements for products sold in the online store, and frequent pop-up advertising messages are unavoidable.³⁰³ The intent of Dr. Mercola’s website is unambiguous: it maligns vaccines and other modes of scientific medicine while extolling the virtues of his natural supplements. Dr. Mercola never mentions the side effects and negative consequences of natural supplements.³⁰⁴

²⁹⁸ Joseph M. Mercola, *Help Knock Out Your Baby’s Health Enemies – Use Probiotic Supplements*, MERCOLA.COM (Oct. 27, 2011), <http://articles.mercola.com/sites/articles/archive/2011/10/27/probiotics-for-newborn-babies.aspx> [http://perma.cc/9CGF-WPDH].

²⁹⁹ Joseph M. Mercola, *GAPS Nutritional Program: How a Physician Cured Her Son’s Autism*, MERCOLA.COM (July 31, 2011), <http://articles.mercola.com/sites/articles/archive/2011/07/31/dr-natasha-campbell-mcbride-on-gaps-nutritional-program.aspx> [http://perma.cc/4AST-W8LG].

³⁰⁰ *Id.*

³⁰¹ Mercola, *Alternatives to the Flu Vaccine*, *supra* note 297.

³⁰² *Id.* (emphasis in the original).

³⁰³ *Id.*

³⁰⁴ See Andrew I. Geller et al., *Emergency Department Visits for Adverse Events Related to Dietary Supplements*, 37 NEW ENGL. J. MED. 1531 (2015) (analyzing data from sixty-three emergency departments from 2004 through 2013 and finding an estimated 23,000 visits to emergency departments and over 2100 hospital admissions resulted from adverse effects of dietary supplements).

Because Dr. Mercola's commercial interests are readily apparent and a major focus of the website, a plaintiff most likely will be able to prove Dr. Mercola intended or expected that the contents of his website would cause reliance by readers and consequent purchases from the accompanying online store to which viewers are repeatedly pointed.

Element 4: The misinformation was justifiably relied upon. Dr. Mercola's website contains a dedicated page on which Dr. Mercola describes his qualifications:³⁰⁵

You are wise to question who you can trust when it comes to maintaining, enhancing, or rebuilding your health.

...

And so, my qualifications: first and foremost, I am an osteopathic physician, also known as a DO. DOs are licensed physicians who, similar to MDs, can prescribe medication and perform surgery in all 50 states. DOs and MDs have similar training requiring four years of study in the basic and clinical sciences, and the successful completion of licensing exams. But DOs bring something extra to the practice of medicine. Osteopathic physicians practice a "whole person" approach, treating the entire person rather than just symptoms. Focusing on preventive health care, DOs help patients develop attitudes and lifestyles that don't just fight illness, but help prevent it, too.

I am also board-certified in family medicine and served as the chairman of the family medicine department at St. Alexius Medical Center for five years. I am trained in both traditional and natural medicine.

In addition, I was granted fellowship status by the American College of Nutrition (ACN) in October 2012.³⁰⁶

A reasonable person without a science or medical background would be justified in following the affirmative statements and advice on a website such as Dr. Mercola's, where the publisher presents valid

³⁰⁵ Mercola, *About Dr. Mercola*, *supra* note 285.

³⁰⁶ *Id.*

credentials and information that, to the lay person, would reasonably appear to validate his claims. A plaintiff would have to show that she acted in reliance on the misrepresentations and that a reasonable person would have relied on the misinformation.³⁰⁷

Element 5: By someone who was harmed as a result of the reliance. As in all tort litigation, the plaintiff has the burden to prove harm and that actions taken in reliance on misrepresentations were the proximate cause of the plaintiff's harm without a superseding, intervening cause.³⁰⁸

An unvaccinated person who contracts a vaccine-preventable illness can show a medically sound direct link between the lack of immunity and contraction of the illness.³⁰⁹ The nexus of causation is more tenuous for secondary and tertiary cases.³¹⁰ However, public health organizations use sophisticated epidemiological methods to accurately track the course of vaccine-preventable diseases and can establish scientifically valid links between patients and their contacts.³¹¹

Since this Article presents a novel approach³¹² to litigating potentially tortious Internet health-related website misrepresentation, other similar cases illustrate applicability by analogy. In *Lentell v. Merrill Lynch & Co.*, non-client investors claimed Merrill Lynch manipulated market prices and published artificially inflated stock values on the Merrill Lynch investor website.³¹³ Investors suffered substantial losses when the value of the inflated stock fell.³¹⁴ Although Lentell's action was unsuccessful for other reasons,³¹⁵ the court reiterated the generally accepted principles of fraudulent misrepresentation:

³⁰⁷ Johnson, *supra* note 260, at 15.

³⁰⁸ *Id.*

³⁰⁹ Parker, *supra* note 247, at 447, 449-53.

³¹⁰ *Id.*

³¹¹ *Id.*

³¹² Austl. Competition and Consumer Comm'n v. Homeopathy Plus! Austl. Pty Ltd. [No 2] (2015) FCA 1090 (Austl.) (holding Homeopathy Plus! used false and misleading claims about the efficacy of the pertussis vaccine to entice customers to purchase nutritional substitutes in lieu of vaccination; imposed fines and injunctive relief).

³¹³ 396 F.3d 161, 165 (2d Cir. 2005).

³¹⁴ *Id.* ("[P]ublic investors lost hundreds of millions of dollars.").

³¹⁵ *Id.* at 177 (holding plaintiffs did not properly claim per heightened pleading requirements).

*To state a claim for relief . . . plaintiffs must allege that [a defendant] (1) made misstatements or omissions of material fact; (2) with scienter; (3) in connection with the purchase or sale of securities; (4) upon which plaintiffs relied; and (5) that plaintiffs' reliance was the proximate cause of their injury.*³¹⁶

The court analyzed each element, connecting the misstatements knowingly placed in the Internet postings to stock purchases by investors who relied on the Internet postings and that such reliance was the proximate cause of the damages sought.³¹⁷

Likewise, in cases such as Dr. Mercola's website, a plaintiff will likely be successful by proving the five elements of fraudulent misrepresentation—(1) misrepresentation of fact, (2) intentional or reckless disregard for its falsity, (3) intended or expected reliance, (4) justifiably reliance, and (5) resultant harm. A plaintiff would be guided by Restatement (Second) of Torts section 310 to recover for physical harm, and Restatement (Second) of Torts section 525 for economic harm.

C. Negligent Misrepresentation

The tort of negligent misrepresentation involves harm caused by publication of false information for the guidance of others in a business transaction when the publisher "fails to exercise reasonable care or competence in obtaining or communicating the information."³¹⁸ Negligent misrepresentation does not command the same scienter requirement as fraudulent misrepresentation, needing only negligence rather than intent with regard to the veracity of published statements.³¹⁹ Additionally, when misinformation is provided in the context of a commercial relationship with a pecuniary interest, the publisher is liable for harm caused by the consumer's "justifiable reliance upon the information, if [the publisher] fails to exercise reasonable care or competence in obtaining or communicating the information."³²⁰ The resulting harm could be physical (in which

³¹⁶ *Id.* at 172 (quoting *In re IBM Securities Litigation*, 163 F.3d 102, 106 (2d Cir. 1998)).

³¹⁷ 396 F.3d at 165-66.

³¹⁸ RESTATEMENT (SECOND) OF TORTS § 552 (AM. LAW INST. 1977).

³¹⁹ Johnson, *supra* note 260, at 128.

³²⁰ *Id.*

case Restatement (Second) of Torts section 311³²¹ would provide guidance); or economic (in which case Restatement (Second) of Torts section 552³²² would provide guidance).

Similar to the elements of fraudulent misrepresentation, an action for negligent misrepresentation requires the following three elements to establish a prima facie case: (1) a publisher gives false information (2) to another who, reasonably relies on that information, and (3) is economically or physically harmed as a result of his or her reliance.³²³ The information can be conveyed to “another” and to a third person whom the publisher should expect to be put in peril by the misrepresentation.³²⁴ For recovery of economic losses in business transactions, the publisher must also fail to “exercise reasonable care or competence in obtaining or communicating the information.”³²⁵ Below, each element is explained and applied to a prototypical scenario involving websites that convey false and misleading information about vaccines to the public.

Element 1: Publisher gives false information. Similar to fraudulent misrepresentation, website publishers use tactics and tropes, as discussed above, to publish information that ignores valid, reproducible, peer-reviewed scientific evidence and, instead publish information with a negligent disregard for the truth.

For example, ImmunizationAlternatives.com is a website dedicated to informing readers of the many dangers of vaccination while advocating “safe, effective” homeopathic alternatives to vaccines as well as homeopathic treatments for already diagnosed vaccine-preventable illnesses.³²⁶ The website is published by Kari Kindem, a “classical homeopath” who has an undergraduate degree in international relations, has received 500 hours of homeopathic training, and received various certifications from homeopathic

³²¹ RESTATEMENT (SECOND) OF TORTS § 311 (AM. LAW INST. 1965).

³²² RESTATEMENT (SECOND) OF TORTS § 552 (AM. LAW INST. 1977).

³²³ RESTATEMENT (SECOND) OF TORTS § 311 (AM. LAW INST. 1965).

³²⁴ *Id.*

³²⁵ RESTATEMENT (SECOND) OF TORTS § 552 (AM. LAW INST. 1977).

³²⁶ Kari J. Kindem, *HOMEOPROPHYLAXIS – HOMEOPATHIC IMMUNIZATION*, IMMUNIZATIONALTERNATIVES.COM, <http://immunizationalternatives.com> [<http://perma.cc/Y38R-S78G>] (last visited Nov. 20, 2015). This site was chosen because, unlike the Mercola.com website example of fraudulent misrepresentation where the publisher is a physician, the ImmunizationAlternatives.com publisher is a homeopath with no formal traditional medical education or training.

organizations, but has no formal healthcare training.³²⁷ Some of the false and misleading web pages include the following (capitalization in the originals):

VACCINE DANGERS: TOXINS.³²⁸

VACCINATIONS: WHY SAY NO!³²⁹

HOMEOPATHIC TREATMENT OF INFECTIOUS
CHILDHOOD DISEASES³³⁰

The foregoing webpages and others similar are evidence that Kari Kindem publishes many unsupported contentions—that have been extensively studied and debunked—as facts and reasons to avoid vaccination. The published information, singularly and in aggregate,

³²⁷ Kari J. Kindem, *KARI J. KINDEM, CFHOM, CHP, CEASE PRACTITIONER, About Kari J. Kindem, CFHom, CHP, CEASE Practitioner*, IMMUNIZATIONALTERNATIVES.COM, <http://immunizationalternatives.com/about-kari-j-kindem-cfhom/> [<http://perma.cc/5T2U-PW8Y>] (last visited Nov. 20, 2015).

³²⁸ Kari J. Kindem, *VACCINE TOXINS – TOXIC INGREDIENTS IN VACCINES*, IMMUNIZATIONALTERNATIVES.COM, <http://immunizationalternatives.com/vaccine-toxic-ingredients/> [<http://perma.cc/32JP-4ASR>] (last visited Nov. 20, 2015). Dozens of “toxins” are listed on this page, including animal tissues, formaldehyde, glycerol, “human aborted fetal tissue,” and mercury.

³²⁹ Kari J. Kindem, *VACCINATIONS: WHY SAY NO!*, IMMUNIZATIONALTERNATIVES.COM, <http://immunizationalternatives.com/vaccinations-say-no/> [<http://perma.cc/S8BC-3JK7>] (last visited Nov. 20, 2015). This webpage is headed with bolded and centered words in red that proclaim: “Vaccines Are Toxic and Unsafe,” “‘Herd Immunity’ Is a Myth,” “A Balanced, Healthy Immune System is How to Prevent Disease,” and “Homeoprophylaxis is a safe, homeopathic alternative that strengthens the immune system for natural immunity.”

³³⁰ Kari J. Kindem, *HOMEOPATHY FOR INFECTIOUS CHILDHOOD DISEASES*, IMMUNIZATIONALTERNATIVES.COM, <http://immunizationalternatives.com/homeopathy-for-infectious-childhood-diseases/> [<http://perma.cc/FFV4-76NH>] (last visited Nov. 20, 2015). This page contains links to all vaccine-preventable diseases. The links take readers to individual pages where the diseases are described and homeopathic remedies (that “will help a person with the measles relieve their symptoms effectively and naturally”) are listed. Nowhere on these pages is advice to seek conventional medical consultation or treatment. Also not mentioned are the signs and symptoms of serious disease effects that would compel hospitalizations. *See, e.g.*, Kari J. Kindem, *MEASLES – RUBEOLA TREATMENT AND PREVENTION*, IMMUNIZATIONALTERNATIVES.COM, <http://immunizationalternatives.com/measles/> [<http://perma.cc/H7ZT-2QFJ>] (last visited Nov. 20, 2015).

directly encourages readers not to vaccinate but, instead, to use homeopathic prophylactic and treatment measures. A harmed plaintiff most likely would be able to prove the information published on the website constitutes material misrepresentations of facts.

Element 2: To another who reasonably relies on that information. With bold red text, the ImmunizationAlternatives.com website contains affirmative statements that implore readers to avoid “[t]oxic and [u]nsafe” vaccines and, instead, use “[h]omeoprophylaxis [as] a safe, homeopathic alternative that strengthens the immune system for natural immunity.”³³¹ As in the Mercola.com website, a reasonable person without a science or medical background would be justified in following the advice on a website such as ImmunizationAlternative.com, where the publisher presents homeopathic credentials and information that, to the lay person, would reasonably appear to validate her claims. In fact, there is no requirement that a publisher of misinformation have any medical expertise to cause actionable reliance on the part of a reader.³³² A plaintiff would have to show that she acted in reliance on the misrepresentations and that a reasonable person would have relied on the misinformation.³³³

Element 3: And is economically or physically harmed as a result. As in the Mercola.com analysis, a plaintiff would have the burden to prove harm and that actions taken in reliance on misrepresentations were the proximate cause of the plaintiff’s harm without a superseding, intervening cause.³³⁴

A plaintiff who has established appropriate privity through a transactional relationship with the website publisher and reasonably relied on the false information published on sites such as ImmunizationAlternative.com to her detriment would most likely be able to recover for economic or physical harm that resulted from that reliance. A plaintiff would be guided by Restatement (Second) of Torts section 311 to recover for physical harm, and Restatement (Second) of Torts section 552 for economic harm.

³³¹ Kindem, *VACCINATIONS: WHY SAY NO!*, *supra* note 330.

³³² Gianocostas v. Interface Grp.-Mass., Inc., 881 N.E.2d 134, 140 (Mass. 2008).

³³³ Johnson, *supra* note 260, at 15.

³³⁴ *Id.*; see *supra* Part IV.C.5 and accompanying text.

D. Privity Requirements

In addition to the elements discussed above, fraudulent and negligent misrepresentation have different privity requirements.

1. Privity in Fraudulent Misrepresentation

Restatement (Second) of Torts, section 531 states:

*One who makes a fraudulent misrepresentation is subject to liability to the persons or class of persons whom he intends or has reason to expect to act or to refrain from action in reliance upon the misrepresentation, for pecuniary loss suffered by them through their justifiable reliance in the type of transaction in which he intends or has reason to expect their conduct to be influenced.*³³⁵

A website publisher would have “reason to expect” a reader would rely on the information presented if a reasonable person would believe a reader would follow the advice provided.³³⁶ In *Ultramares Corp. v. Touche*, defendants were held liable to a third party for defendant’s financial statement certifications.³³⁷ The *Ultramares* court held that a wide circle of liability was justified by the reprehensible conduct of fraud, thus ensuring liability for harm to third party plaintiffs.³³⁸ As in *Ultramares*, websites such as Mercola.com are published and linked to search engines with the sole purpose of reaching a broad market audience and, thereby, enticing readers to purchase commercial products from them.

However, a website publisher would not be liable for the beliefs or actions of unintended or unexpected third parties unless a direct connection or reasonable person’s expectation can be proved.³³⁹

2. Privity in Negligent Misrepresentation

While common law jurisdictions impose varying privity requirements between plaintiff and defendant, the Restatement (Second) of Torts takes a middle ground, requiring more than

³³⁵ RESTATEMENT (SECOND) OF TORTS § 531 (AM. LAW INST. 1977).

³³⁶ *Id.* cmt. d.

³³⁷ 174 N.E. 441, 446 (N.Y. 1931).

³³⁸ *Id.*

³³⁹ *Id.* cmt. b.

foreseeability but less than absolute or near privity.³⁴⁰ Restatement (Second) or Torts, section 552 states that negligent misrepresentation is actionable by a limited group of persons in whom the publisher induces or intends to induce reliance.³⁴¹

Further, the website publisher need not know the identity of misinformation recipients but only that members of a group of persons—in this case, those who visit the website—have access to the information published on the website and will “foreseeably . . . take some action in reliance upon” the misinformation provided.³⁴² Nevertheless, a person injured as the result of reliance on negligent misrepresentation may argue that the indicia of falsity are so compelling as to allow relaxation of privity requirements.

E. Causation

As in all tort actions, a plaintiff must prove both factual and proximate causation.

1. Factual causation—the causal link. A “plaintiff must show that ‘but for’ the defendant’s tortious conduct, harm would not have occurred [and that], had the misrepresentation not been made, damages would not have been suffered.”³⁴³

Both the Mercola.com and the ImmunizationAlternatives.com examples are “not unwitting publication of an advertisement that turns out to be false [but], instead . . . the publisher took a knowing and active part in the perpetration of the fraud.”³⁴⁴ In *Knepper v. Brown*, Dr. Brown, a dermatologist, portrayed himself to be a surgeon who was qualified to perform liposuction procedures.³⁴⁵ Knepper made her decision to undergo a liposuction procedure based on Brown’s board certification, that he advertised and told Knepper was in “plastic and reconstructive surgery,” and based on the many advertisements by Brown that he could competently perform liposuction.³⁴⁶ The procedure was performed negligently, causing permanent harm.³⁴⁷ The

³⁴⁰ Johnson, *supra* note 260, at 140.

³⁴¹ RESTATEMENT (SECOND) OF TORTS § 552(2) (AM. LAW INST. 1977).

³⁴² RESTATEMENT (SECOND) OF TORTS § 552 cmt. h (AM. LAW INST. 1977).

³⁴³ Johnson, *supra* note 260, at 66.

³⁴⁴ *Knepper v. Brown*, 195 P.3d 383, 389 (Or. 2008).

³⁴⁵ *Id.* at 384.

³⁴⁶ *Id.* at 385.

³⁴⁷ *Id.*

court held “the misrepresentation created the risk that those who relied on it would be harmed as a particular result” of their reliance on the misrepresentation.³⁴⁸

Similarly, the Mercola.com and the ImmunizationAlternatives.com websites contain misrepresentations of fact material to readers’ decisions about vaccination and use of vaccine alternatives. Readers may assert that, but for those affirmative statements, they would have made a different decision and not suffered the harm that resulted directly from actions taken in reliance on the websites’ misinformation.

On the other hand, unlike *Knepper*, where the physician falsely advertised and, on that basis, formed a doctor-patient relationship, people who find information on the Internet do not form a one-on-one relationship with a single website such that a direct causal link can be established easily. Websites offering anti-vaccine information are plentiful and readily accessible using one of many search engines. A plaintiff would have to show that she relied on the misinformation contained on the specific website and, but for that reliance, she would not have been harmed. For example, the *Vaccination and Homeopathy* website contains misinformation similar to that found on Mercola.com and ImmunizationAlternatives.com.³⁴⁹

If a plaintiff viewed other websites, she would have to show that the defendant’s website was a factual cause, but not necessarily the only cause.³⁵⁰ Otherwise, a court may employ the alternative liability doctrine to shift the burden of proof to multiple named defendants to establish which caused the harm.³⁵¹ The Restatement (Second) of Torts states:

Where the conduct of two or more actors is tortious, and it is proved that harm has been caused to the plaintiff by only one of them, but there is uncertainty as

³⁴⁸ *Id.* at 389.

³⁴⁹ See Pratt, *supra* note 5.

³⁵⁰ Rogers v. Missouri Pac. R. Co., 352 U.S. 500, 506-07 (1957) (“[T]he test of a jury case is simply whether the proofs justify with reason the conclusion that [defendant’s] negligence played any part, even the slightest, in producing the injury or death for which damages are sought. It does not matter that, from the evidence, the jury may also with reason, on grounds of probability, attribute the result to other causes, including the [defendant’s] contributory negligence.”).

³⁵¹ Summers v. Tice, 199 P.2d 1, 4 (Cal. 1948).

*to which one has caused it, the burden is upon each such actor to prove that he has not caused the harm.*³⁵²

Without the alternative liability doctrine, “there will rarely be any compensation for patients injured” where the harm cannot be ascribed to a single defendant among many possible responsible defendants.³⁵³

However, a plaintiff could also provide indicia of reliance on a particular website by providing receipt evidence of her visit to the website on a specific date and purchase of goods from that website. If a website offers a membership or other way to sign up for newsletters or make purchases from an online store, such evidence of a plaintiff’s greater interaction with the website than mere viewing would add strength to her claim.

2. Proximate (legal) causation. After a plaintiff establishes the defendant’s conduct is a factual cause of her harm, she must also establish whether the defendant is legally responsible for the harm. “A fraudulent misrepresentation is a legal cause of a pecuniary loss resulting from action or inaction in reliance upon it if, but only if, the loss might reasonably be expected to result from the reliance.”³⁵⁴ Therefore, proximate cause is established if, from the perspective of a reasonable person looking forward, the harm was a foreseeable consequence of the defendant’s actions, regardless of the extent of the harm or the manner in which it was induced.³⁵⁵

In cases of infection by vaccine-preventable diseases, the link between failure to vaccinate and harm from eventual illness can prove both the factual and proximate cause of harm.³⁵⁶ The 2005 Indiana measles outbreak illustrates how this causal link can be established definitively: “This outbreak was caused by the importation of measles into a population of children whose parents had refused to have them vaccinated because of safety concerns about the vaccine. High

³⁵² RESTATEMENT (SECOND) OF TORTS § 433B(3) (AM. LAW INST. 1965).

³⁵³ *Ybarra v. Spangard*, 154 P.2d 687, 691 (Cal. 1944) (holding multiple potential tortfeasors jointly liable for injuries to patient harmed while unconscious under anesthesia when the responsibility of the injury could not be attached to a single tortfeasor).

³⁵⁴ RESTATEMENT (SECOND) OF TORTS § 548A (AM. LAW INST. 1977).

³⁵⁵ *Id.* cmt. b.

³⁵⁶ *Parker*, *supra* note 247, at 452-54.

vaccination levels in the surrounding community and low rates of vaccine failure averted an epidemic.”³⁵⁷

Vaccine-preventable diseases are endemic and exposure to someone infected with or carrying one of these diseases is a foreseeable and ordinary occurrence. Therefore exposure to, and subsequent infection with a vaccine-preventable disease would not be a superseding cause that would shift or eliminate liability.³⁵⁸

F. Damages

Harm caused by either fraudulent or negligent misrepresentation may produce damages in the form of physical harm³⁵⁹ or economic losses.³⁶⁰ Liability also applies if harm befalls “[t]hird parties whom the actor should expect to be put in peril by the action taken.”³⁶¹ Punitive damages may also be available in some jurisdictions depending on state or common law and constitutional limitations of proportionality and reasonableness.³⁶²

Plaintiffs’ claims for damages would be evaluated on a case-by-case and injury-by-injury basis. Manifestations of harm will be unique to each case and so will the damages and their proof. Damages caused by failure to immunize are tangible and quantifiable. These include physical harm as well as pain and suffering caused to those who contract a vaccine-preventable disease, the economic impact of their care, lost wages caused by requirements to care for those who are sick, unreimbursed expenses of health care, and long-term expenditures for lasting disabilities.

³⁵⁷ *Id.*

³⁵⁸ *Godbee v. Dimick*, 213 S.W.3d 865, 883 (Tenn. Ct. App. 2006) (holding a negligent actor relieved from liability only when a “new, independent, and unforeseen [sic] cause intervenes to produce a result that could not have been foreseen”); *State v. Pelham*, 824 A.2d 1082, 1092 (N.J. 2003) (holding independent intervening cause must be unforeseeable or an “extraordinary and abnormal occurrence”) (quoting *People v. Funes*, 28 Cal. Rptr. 2d 758, 766 (1994)).

³⁵⁹ RESTATEMENT (SECOND) OF TORTS §§ 310, 311 (AM. LAW INST. 1965).

³⁶⁰ RESTATEMENT (SECOND) OF TORTS §§ 525, 552 (AM. LAW INST. 1977).

³⁶¹ RESTATEMENT (SECOND) OF TORTS § 311 (AM. LAW INST. 1965); *accord* RESTATEMENT (SECOND) OF TORTS § 310 cmt. c (AM. LAW INST. 1965).

³⁶² *Johnson*, *supra* note 260, at 99-102.

G. Defenses

1. Plaintiff's assumption of the risk. While not an affirmative defense to fraud, a defendant in a negligent misrepresentation action may claim the plaintiff assumed the risk inherent in the activity by voluntarily participating.³⁶³ Assumption of the risk can create a barrier to liability.³⁶⁴

In cases of anti-vaccine website publishers who use the forum to sell alternative commercial products, the website publisher would likely claim that the website reader had decided not to vaccinate, or decided to use products available for sale on the website as a substitute for vaccination. The publisher may contend that, after reviewing the information presented, voluntarily choosing to believe the information to be true, and following the guidance on the website, the victim assented to the risks of using the products in lieu of vaccination. The website publisher would assert an assumption of the risk defense to hold the victim responsible for believing the false or misleading information that the publisher had placed on the commercial website.

This defense would not likely garner judicial sympathy. Arguably, the least medically savvy and most gullible readers would fall prey to anti-vaccine websites. Notwithstanding this probability, the primary purpose of “laws [is] to protect the weak, the uninformed, the unsuspecting, and the gullible from the exercise of their own volition.”³⁶⁵ Further, “[i]t is immaterial whether only the most gullible would have been deceived by this technique. [The law] protects the naïve as well as the worldly-wise, and the former are more in need of protection than the latter” who would otherwise remain silent victims.³⁶⁶

2. Contributory and comparative negligence. Likewise, a defendant in a negligent misrepresentation action may claim the plaintiff's negligence contributed to the harm caused by the action or inaction that resulted from the defendant's misrepresentations.³⁶⁷ In states where comparative negligence

³⁶³ *Id.* at 76.

³⁶⁴ *Id.*

³⁶⁵ *Paris Adult Theatre I v. Slaton*, 413 U.S. 49, 64 (1973).

³⁶⁶ *Lemon v. United States*, 278 F.2d 369, 373 (9th Cir. 1960) (holding a victim's gullibility did not preclude defendant's liability in a fraudulent misrepresentation action).

³⁶⁷ *Johnson*, *supra* note 260, at 65.

is used, a plaintiff's negligence is compared with that of the defendant.³⁶⁸ Depending on the state's formula for calculating comparative negligence, the successful plaintiff's award would be calculated based on her proportion of fault or, in some states, not awarded at all if too large a proportion of fault were assigned to the plaintiff.³⁶⁹

When anti-vaccine websites provide misinformation, and reliance on that misinformation produces harm, "laws are to protect the weak, the uninformed, the unsuspecting, and the gullible from the exercise of their own volition."³⁷⁰ Uninformed victims who seek guidance on how to keep their family healthy would not likely be viewed as contributing to their own harm when relying on artfully presented misinformation.³⁷¹

A defendant may also claim the plaintiff should have further investigated the veracity of claims made on the subject website. However, for the unsophisticated reader, "there is no duty to investigate the truthfulness of a misrepresentation unless the facts and circumstances put the plaintiff on guard or cast suspicion upon its truthfulness."³⁷²

Thus, a plaintiff's reasonable reliance on artfully presented misrepresentations should not present a defendant with a viable defense. To do so would negate misrepresentation actions by using the success of the misrepresentation as a defense.

3. Truth. In actions for fraudulent misrepresentation, a defendant website publisher may contend that "[t]he publisher of a statement injurious to another is not liable for injurious falsehood if the facts stated, or implied as justification for an opinion stated, are true."³⁷³ However, even an honestly held opinion is actionable if false.³⁷⁴

³⁶⁸ *Id.* At 65-66.

³⁶⁹ *Id.*

³⁷⁰ *Paris Adult Theatre I*, 413 U.S. at 64.

³⁷¹ *Darner Motor Sales, Inc. v. Universal Underwriters Ins. Co.*, 682 P.2d 388, 403 (Ariz. 1984) (holding an insurance broker liable for misleading statements on which he reasonably knew plaintiff would rely).

³⁷² *Doe v. Dilling*, 888 N.E.2d 24, 47 (Ill. 2008) (Kilbride, J., concurring).

³⁷³ RESTATEMENT (SECOND) OF TORTS § 634 (AM. LAW INST. 1977).

³⁷⁴ *Id.* cmt. c.

On popular websites such as ImmunizationAlternatives.com and Mercola.com, statements are made by professionals who present their credentials to lend credibility to their misrepresentations presented as fact. Indeed, “most anti-vaccine speech is not merely opinion [but rather. Anti-vaccine advocacy—whether made by medical providers or as part of a commercial transaction—is almost always conveyed as [if it were] scientific or medical fact.”³⁷⁵

In such cases, where a professional knows the “misleading nature of a statement of opinion, or acts with reckless indifference, a layperson who detrimentally relies may be entitled to sue for damages.”³⁷⁶ Website publishers’ forceful statements provide evidence that the misrepresentations are not matters of opinion but “facts” the publisher hopes readers will accept.³⁷⁷

4. Free speech and advertising hyperbole. Website publishers may contend their website speech enjoys First Amendment protection. Indeed, the “First Amendment, as applied to the States through the Fourteenth Amendment, protects commercial speech from unwarranted governmental regulation . . . based on the informational function of advertising.”³⁷⁸ However, “[f]or commercial speech to come within that provision, it at least must concern lawful activity and not be misleading.”³⁷⁹ Indeed, “there is no constitutional value in false statements of fact. Neither the intentional lie nor the careless error materially advances society’s interest in ‘uninhibited, robust, and wide-open’ debate on public

³⁷⁵ Amanda Z. Naprawa, *Don’t Give Your Kid That Shot!: The Public Health Threat Posed By Anti-Vaccine Speech And Why Such Speech Is Not Guaranteed Full Protection Under The First Amendment*, 11 CARDOZO PUB. L. POL’Y & ETHICS J. 473, 501 (2013).

³⁷⁶ Johnson, *supra* note 260, at 46.

³⁷⁷ See Kindem, *VACCINATIONS: WHY SAY NO!*, *supra* note 330. This web page is headed with bolded and centered words in red that proclaim: “Vaccines Are Toxic and Unsafe,” “‘Herd Immunity’ Is a Myth,” “A Balanced, Healthy Immune System is How to Prevent Disease,” and “Homeoprophylaxis is a safe, homeopathic alternative that strengthens the immune system for natural immunity.” *Id.*

³⁷⁸ Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm’n, 447 U.S. 557, 563 (1980).

³⁷⁹ *Id.* at 566.

issues.”³⁸⁰

In commercial anti-vaccine websites, misrepresentations of fact are presented in the context of a public controversy to influence readers to avoid vaccinations in favor of using products offered for sale on the websites. Misinformation that “‘links a product to a current public debate’ is not thereby entitled to the constitutional protection afforded noncommercial speech . . . [T]here is no reason for providing similar constitutional protection when such statements are made in the context of commercial transactions.”³⁸¹

Additionally, commercial advertisers often use hyperbole (“puffery”) to enhance the appeal of products without, however, saying anything specific about the facts.³⁸² “Statements that extend beyond expressing a favorable opinion, and instead assert false facts, are actionable.”³⁸³ Therefore, website publishers who may claim their misinformation merely “casts a rosy glow over a transaction” are defeated by the specificity with which the misinformation is conveyed.³⁸⁴ To further discredit website publishers who misinform the public, First Amendment jurisprudence has demonstrated that “punishing fraud has no impermissible ‘chilling’ effect on the right to express views” on matters of public debate or controversy.³⁸⁵

5. Disclaimer. A defendant website publisher may claim that a disclaimer of liability located somewhere in the many pages that comprise the website sufficiently informs readers that information on the website is opinion, urges readers to make their own decisions, and purports to reject legal responsibility in the publisher.

The Mercola.com disclaimer reads, in its entirety (with emphasis in the original):

Disclaimer: *The entire contents of this website are based upon the opinions of Dr. Mercola, unless otherwise noted. Individual articles are based upon the*

³⁸⁰ Gertz v. Robert Welch, Inc., 418 U.S. 323, 340 (1974) (quoting New York Times Co. v. Sullivan, 376 U.S. 254, 270 (1964)).

³⁸¹ Bolger v. Youngs Drug Prod. Corp., 463 U.S. 60, 67-68 (1983).

³⁸² Johnson, *supra* note 260, at 46.

³⁸³ *Id.* at 47.

³⁸⁴ *Id.* at 46.

³⁸⁵ Knepper, 195 P.3d at 389.

*opinions of the respective author, who retains copyright as marked. The information on this website is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Mercola and his community. Dr. Mercola encourages you to make your own health care decisions based upon your research and in partnership with a qualified health care professional. If you are pregnant, nursing, taking medication, or have a medical condition, consult your health care professional before using products based on this content.*³⁸⁶

The ImmunizationAlternatives.com disclaimer reads, in substantial part (with emphasis in the original):

Legal Disclaimer: Immunization Alternatives [sic] Website

This Immunization Alternatives website offers information and resources to general public on classical homeopathy and homeoprophylaxis for educational and informational purposes only.

- *This website is in no way intended as a substitute for professional homeopathic and/or medical care. [red text in original]*
- *Nothing described in this web site should be construed by any reader or other person to be a diagnosis or treatment for any disease or condition. If you are seeking a medical diagnosis, you must consult with a licensed medical professional. [red text in original]*
- *Any use or misuse of the information presented here for educational purposes are [sic] the sole responsibility of the reader. All content on this Immunization Alternatives website are [sic] intended as an adjunct to, not a substitute for*

³⁸⁶ Mercola, *Current Health News*, *supra* note 277. (The disclaimer is found at the bottom of every page of Dr. Mercola's website).

professional homeopathic and/or medical treatment.

- *Immunization Alternatives, any Associated Homeopaths, author(s) and/or it's publisher are NOT responsible for any ill effects, loss, damage or injury caused, or alleged to caused by the information contained in this website or for the misuse of this information.*
- *All therapies, treatments, exercises or energetic interventions of any nature should be undertaken only under the direct guidance and care of a properly and fully trained Homeopath or health care professional specializing in the services rendered.*³⁸⁷

As in *Basis Yield Alpha Fund (Master) v. Goldman Sachs Grp., Inc.*, a “disclaimer of reliance cannot preclude a claim of justifiable reliance on the seller’s misrepresentations or omissions unless (1) the disclaimer is made sufficiently specific to the particular type of fact misrepresented or undisclosed; and (2) the alleged misrepresentations or omissions did not concern facts peculiarly within the seller’s knowledge.”³⁸⁸

Courts will most likely find general disclaimers such as those on *Mercola.com* and *ImmunizationAlternative.com* websites are generic, boilerplate language that are ineffective in insulating publishers from liability. While the intent of the disclaimers is apparent, the disclaimers’ advice that readers should make their own decisions is contradicted by the forceful and repetitive exhortations to avoid vaccines and to purchase alternative products on the website’s online store. Additionally, a disclaimer caveat that products should be used under the guidance of someone trained in their use belies the contrary invitations to purchase products directly and consume them without any oversight by someone trained in their use. Therefore, general disclaimers, such as the one depicted above, will probably be inadequate to constitute effective warning and insulate the maker from liability.

³⁸⁷ Kari J. Kindem, *LEGAL DISCLAIMER*, IMMUNIZATIONALTERNATIVES.COM, <http://immunizationalternatives.com/legal-disclaimer/> [<http://perma.cc/3X8H-PMPF>] (last visited Nov. 20, 2015).

³⁸⁸ 980 N.Y.S.2d 21, 28 (2014).

VI. CONCLUSION

*The crafty means contrived by the wit and greed of man
to evade the law have too often been successful.*³⁸⁹

*There may be times when we are powerless to prevent
injustice, but there must never be a time when we fail to
protest.*³⁹⁰

One of the greatest breakthroughs in science and medicine—vaccines—has been cast into doubt by those who are unaware of the horror of plagues long conquered by the achievement they now vilify. Smallpox is a memory. Polio exists only in four countries, thanks to vaccines and the tireless work of those who have dedicated their lives to its eradication. Thanks to near-universal vaccination in the United States, measles had been eradicated, save for cases imported from outside the United States. Mumps, rubella, tetanus, diphtheria, whooping cough, rotavirus, meningitis, chickenpox—all have been contained by vaccines and a robust public health system.

Yet conspiracy theories have combined with a few reality-deniers who have fraudulently popularized myths of autism, toxins, and contaminants to create such distrust in vaccines that the diseases they prevent are returning. Ubiquitous access to the Internet has facilitated the spread of false and misleading information for skeptics to find with the click of a mouse. Some websites combine misinformation with a profit motive, linking vaccine fear-mongering to offers of purportedly safe and effective alternatives such as natural supplements or homeopathic remedies, that contain no ingredients of medical value.

While there are many products offered for sale on the Internet and elsewhere for which there is limited or no value, tortious liability attaches when that commercial product and the healthcare decisions that attend to its use cause harm to those who follow the false and misleading advice and to others who are secondarily affected. This Article has examined vaccine controversies, discussed many stratagems used on commercial anti-vaccine websites, and examined

³⁸⁹ *In re Pittock*, 19 F. Cas. 745, 747 (D. Or. 1873).

³⁹⁰ ELIE WIESEL, *Hope, Despair and Memory*, in NOBEL LECTURES, PEACE 1981–1990 (Tore Frängsmyr ed., World Scientific Publishing Co. 1997). Elie Wiesel is a Romanian-born Jewish Nobel Laureate. He was awarded the Nobel Peace Prize for his writings about his internment in several concentration camps, including Auschwitz and Buchenwald, during World War II. *Id.*

the distorted thinking involved in homeopathic practices and formulations.

Although not yet litigated in this manner, this Article asserts that the Restatement (Second) of Torts offers viable litigation options in fraud and negligent misrepresentation for those harmed by false and misleading information on commercial websites that advocate their products in favor of proven vaccines.

The nearly universal use of vaccines in the United States has immeasurably benefitted all persons and saved millions of lives. On the other hand, the commercial misrepresentation of vaccines benefits only the few who use fear, gullibility, and deceptive practices to profit while causing irreparable harm to some of those who believe and trust in the misrepresentations. For those harmed by such misrepresentation, the law provides remedies.